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TOXIC DUSTS, FUMES AND GASES IN INDUSTRY*

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DURING the year 1941, the Massachusetts Division of Occupational Hygiene was called on to furnish information concerning one hundred and twenty-four different industrial poisons,[1] receiving 1206 inquiries. Eighty per cent of these inquiries concerned the poisonous nature of the dusts, fumes and gases. Thus today my discussion concerns by far the greater part of the work done by this division.

Before taking up the industrial poisons in particular, it may be well briefly to discuss the avenues by which these substances get into the body. There are three main paths of entry, which in order of importance are the bronchopulmonary tree, the skin and the intestinal tract. It is to be emphasized that most industrial poisons enter the body through the lung fields in the form of vapors, gases or dust particles. Relatively few (mercury, nitroglycerin, nitrobenzene, tetraethyl lead, trinitrotoluene, the cyanides and possibly methyl alcohol) are absorbed by way of the skin, and fewer still by way of the gastrointestinal tract. Radium, manganese and cadmium are the chief ones admitted by the last method.

Not all people are equally susceptible to industrial poisons, for it is recognized that the young and the old are more prone to poisoning than are the middle-aged. Women are more susceptible than men, and pregnant women more than nonpregnant ones. People with heart disease usually react poorly to such agents as lead, nitrites, nitrates and the chlorinated hydrocarbons. Those with kidney disease are susceptible to poisoning by the heavy metals. Those with anemia do poorly when exposed to aromatic compounds. Alcohol addicts are in general poor risks.

So far as skin irritation is concerned, it can be said that colored skin is more resistant than white skin. Those with excessively oily skin often develop dermatitis when exposed to cutting oils, waxes and substances soluble in fats, such as trinitroluene and tetryl. Those with dry skin are prone to develop dermatitis from solvents or powders.[2]

METALLIC DUSTS AND FUMES

Lead

The greatest amount of work done on any poison was carried out on lead. All physicians are acquainted with lead poisoning as it occurs in babies and in painters. However, from our records, lead poisoning is not considered in the differential diagnosis by physicians when they examine foundry workers, although such workers are almost invariably found to have abnormal amounts of lead in their urine. Lead is also a hazard in battery-room workers, junk-yard workers, those doing large amounts of lead burning or soldering and those engaged in salvage operations such as the cutting up of lead-painted steel structures.

Like most of the toxic substances that I shall discuss, lead is taken into the system mainly by inhalation. Only rarely is a case of poisoning by way of the gastrointestinal tract seen, and still less frequently does a case from skin absorption occur (tetraethyl lead is probably the only lead compound that is appreciably absorbed through the skin). Palsy, encephalopathy, arthralgia and colic[3] are the four features that most textbooks require for a diagnosis of lead poisoning, but Kehoe[4] found that in 30 patients with proved lead poisoning, only 1 had palsy and only 2 had encephalopathy. Twenty-one had arthralgia and 24 had colic. Thus palsy and encephalopathy can be dropped from discussion as diagnostic criteria. They are too infrequent to be of any value in diagnosis. Weakness, weight loss, constipation, abdominal pain, lead line and extensor weakness of the wrists are better criteria. Stippling of the red cells has not in my experience been found frequently enough to be of any value as a diagnostic aid.

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The Division of Occupational Hygiene has recently made 60 urinary lead determinations on girls engaged in manufacturing electrical products. These girls cut, grind and polish a plastic that contains an appreciable amount of lead. On casual inspection one would say that this process was not at all hazardous. Yet of the 60 urines analyzed, 35, or 58 per cent, showed abnormal amounts of lead. A complete study of these subjects is now being undertaken. It is not claimed that they have lead poisoning, but they are of interest because they are excreting and so must be absorbing abnormal amounts of lead. Since industrial medicine is primarily preventive medicine, the absorption and excretion of lead by workers before they show the signs and symptoms of disease are of great concern.

Recently I was called to a hospital outpatient department to see a man who complained of loss of appetite, abdominal pain, constipation and weakness of six years' duration. Gastrointestinal x-ray examination in 1936, 1939 and 1942 had shown duodenal spasm, but no ulcer. The patient proved to be a molder in a near-by foundry. In June, 1942, we had done air analyses at this foundry, and at that time the air contained lead far in excess of the maximum allowable concentration, which is 1.5 mg. per 10 cubic meters of air.[5] A twenty-four-hour urine specimen of this foundry molder showed an excretion of 0.36 mg. of lead per liter. This is over four times the normal excretion (0.08 mg.). Here, then, was a man with a definite exposure, proved by analysis of the air which he breathed at work, symptoms referable to the gastrointestinal tract, x-ray findings of duodenal spasm and an abnormal excretion of urinary lead. It is not improbable that he had lead poisoning, and had had the same condition intermittently since 1936, though no such diagnosis appeared on his record.

A word should be said about the collection of urine in these workers. To do adequate lead determinations, a twenty-four-hour specimen is desirable, and one must be certain that the urine is collected in a container that has been washed with distilled, lead-free water. The patient must be instructed not to contaminate the urine with lead, for even small amounts introduced by accident will cause a wide error in the determination.

Antimony

The mention of lead automatically brings antimony to mind, for the two are extensively used in printers' type. Antimony is a metal that expands when it cools, and thus helps to maintain the size of the type. It is also employed in the manufacture of storage-battery grids and of red-rubber compounds. Antimony salts have been used in the making of primer caps, and it is possible that they will be used again for this purpose. When antimony dust gets onto the skin it causes an eczematized dermatitis or a folliculitis. When inhaled or ingested it causes a metallic taste in the mouth, stomatitis, loss of appetite, nausea, vomiting, diarrhea, abdominal cramps and loosening of the teeth.[6] These toxic symptoms are similar to those seen after the administration of tartar emetic or after the injection of antimony in the treatment of granuloma inguinale.

Antimony is often found mixed with arsenic, and in cases of poisoning it is difficult for the physician to decide which of these is the toxic agent. Arsenic poisoning need not be discussed here, since industrial poisoning from it differs very little from that occurring after the injection of antisyphilitic arsenicals.

Mercury

Mercury is used in the manufacture of explosives and of scientific apparatus. It is one of the few poisons that can be absorbed through the skin, as occurs in the mercury rubs given in the treatment of syphilis. Mercury is liquid at room temperature and volatilizes at 40°F. Thus fumes are found wherever the metal is left in open receptacles.

Symptoms of industrial mercury poisoning differ slightly from those seen when mercury is administered by injection or inunction. With the latter type of poisoning, there are a metallic taste in the mouth, stomatitis, a blue line along the gums, loss of appetite and diarrhea. In industrial poisoning, however, one also sees mental and neurologic manifestations such as timidness, discouragement, depression, insomnia, irritability and anxiety.[7] Muscle tremors are frequent, at first fine but later becoming coarse. Normally no mercury is found in the urine, and over 0.25 mg. per liter is considered hazardous.[8] Recently we made determinations on the urinary mercury content of 4 laboratory technicians who engaged in determining blood carbon dioxide and pH values. The mercury of the apparatus had been carelessly handled, and much of it had fallen onto the floor and into cracks in the tables and chairs. The workers were thus constantly inhaling mercury fumes emanating from the floor, chairs and tables. They were also absorbing mercury through the skin, for they were accustomed to play with the little mercury globules as they sat at the desks reading or writing reports. The respective urines of these girls showed 0.13, 0.19, 0.26 and 0.55 mg. of mer-

cury per liter. Thus it can be seen that even so small an amount as that spilled on the floor or on the tables in a technical laboratory can be hazardous. No symptoms of mercury poisoning had occurred in any of these subjects, but again the problem is to prevent such poisoning.

Manganese

Another metal of importance is manganese, which is used in alloys, dry batteries, silver solders and foundry work. It causes poisoning in a relatively short time, and cases have occurred after only three or four months of exposure. When any worker presents himself with a picture of multiple sclerosis, the diagnosis of manganese poisoning should be kept in mind, for the two diseases are clinically much alike. Such findings as languor, sleepiness, masklike facies, economical speech, cramps in the muscles of the legs, hyperreflexia, ankle and patellar clonus, retropulsion, propulsion and a slapping gait with a wide base are of common occurrence in both conditions. However, in manganese poisoning there are no eyeground changes, such as bitemporal pallor, and no spinal-fluid abnormalities. Poisoning is usually progressive and leads to disabling paralyses and permanent invalidism, but no shortening of life occurs.

Magnesium

This metal is used in foundry work, in aircraft manufacture and in the making of explosives. It is not a serious poison but causes a specific skin lesion, for when small particles penetrate the skin, a chemical reaction occurs and a specific type of foreign-body granuloma develops.[9] Should much of the dust get into the mouth, it is probable that magnesium would act like other magnesium compounds, such as magnesium sulfate and magnesium hydroxide, causing purging and abdominal cramps.

Radium

Because of the sudden demand for radium-painted dials for airplanes, many workers are being exposed to the effects of radium. The dial-painters and the men who install the dials in instrument boards or work in the stock rooms where the dials are stored are equally exposed. An otherwise excellent book on industrial medicine[3] casually dismisses radium poisoning by stating that its prevention has been shown to be a relatively simple matter, and refers the reader to a bulletin issued by the United States Bureau of Standards (Handbook H-27). On the contrary, it has recently been shown that, despite the finest ventilating equipment and the most meticulous workroom supervision, over a period of one year 3 of 100 girls working in a model radium dial-painting plant stored more radium in their systems than is thought to be safe.[10*] This safety value is probably in the vicinity of 0.1 microgm.[11] Radium poisoning was well known after World War I, when several radium dial-painters a few years after exposure developed osteitis, jaw necrosis, destruction of the bone marrow, anemia and sarcoma.[12]

Since the body cannot differentiate radium from calcium after absorption, much of the radium is excreted, but part of it is stored in the bones, where it bombards the marrow with alpha, beta and gamma particles. Such radiation at first stimulates the blood-forming tissues, but later fibrotic replacement occurs, and still later malignant neoplastic disease is prone to develop. It has been suggested that workers in this field be maintained on an adequate calcium, phosphorus and vitamin D diet for at least a month before going to work. In this way, much of the initial deposition of radium in the bones can be prevented.

It is to be remembered that radon differs from radium in that it is a gas and is taken in only by the bronchopulmonary tree. No absorption is thought to occur. Radon bombards the alveolar cells with radioactive emanations so that after many years, pulmonary carcinoma is apt to occur. The maximum permissible radon air concentration recommended in Massachusetts is 10^{-11} curies per liter.[13]

Fume Fever

Any of the heavy metals when in fume form can produce the syndrome known as metal-fume fever.[14] Originally, it was believed that only zinc fumes caused this syndrome, but of late years it has become known that the fumes of lead, magnesium, and other heavy metals do so as well. The symptoms are thought to be due to the absorption of the foreign protein formed when the metal fumes come in contact with the alveolar cells and cause their necrosis. Some four to eight hours after exposure, the worker notices dryness in the throat, pains in the muscles and joints, weakness, chills and fever. The diagnosis of grippe or incipient pneumonia is often made on these workers. This syndrome is commoner in cold weather and on Mondays or after a day away from work or a vacation. The continued inhalation of the fumes seems to confer some immunity which is lost when the subject remains away from work for over thirty-six hours. No permanent disability has yet occurred from such inhalation, but it is to be remembered that if the fumes are from one of the poisonous metals, serious sequelae may result.

Gases and Vapors

By far the most important toxic gases and vapors are the volatile solvents, which now comprise

*This radium was subsequently eliminated by suitable treatment.

over three hundred and fifty different substances. The toxic gases and vapors are divided into asphyxiants, irritants and metabolic poisons, including the anesthetics and the volatile solvents.

Asphyxiants

The asphyxiants may be classified as physical and chemical. The former act by replacing oxygen in the air. Such agents are hydrogen, methane, ethylene and nitrous oxide. They are of relatively little importance in industry. The chemical asphyxiants act in either of two ways, preventing the formation of oxyhemoglobin or preventing the utilization of oxygen by the tissues.[15] Carbon monoxide, which inhibits the formation of oxyhemoglobin, has been called "probably the most important industrial poison." This may be the case in other states, but in Massachusetts carbon monoxide ranks far below silica, lead and the organic solvents as an industrial hazard. It is formed wherever organic material is burned in the presence of insufficient oxygen. It has an affinity for hemoglobin three hundred times that of oxygen. Thus when it is inhaled, carbon-monoxide hemoglobin forms in preference to oxyhemoglobin. The usual symptoms seen in all asphyxiation cases are present, namely, tightness across the head, headache, throbbing in the temples, weakness, dizziness, dimness of vision, nausea, vomiting, collapse and coma. The worker should be removed from the contaminated area and given oxygen and carbon dioxide by inhalation.

The chief chemical asphyxiants that prevent the utilization of oxygen by the tissues are hydrocyanic acid and its derivatives — cyanogen, acetonitrile and vinyl cyanide.[16] The last is important, for it is now being extensively used as a solvent in the synthetic-rubber industry. Many of these cyanide compounds can be absorbed through the skin. Treatment of cyanide poisoning consists in the formation of methemoglobin, for cyanide has an affinity for this substance. Methemoglobin can be formed by the administration of sodium nitrite by mouth or by the inhalation of amyl nitrite. Methylene blue in doses of 1 to 2 mg. per kilogram of body weight may be given intravenously for this purpose.[8]

Irritants

The second great group of gases is known as the irritants. These cause inflammation and sometimes necrosis of the tissues with which they come in contact. Some give off a warning odor, but this is not a reliable sign, for the olfactory sense readily becomes fatigued or accustomed to the odor, and so fails to warn of the presence of the irritant. Such irritants include the fumes of acids, ammonia and aldehydes.

Since in general they produce no systemic effects, a few principles will help to keep their action in mind. The first point to be remembered is that the part of the respiratory tract affected varies with the solubility of the inhaled irritant in water; that is, the more soluble the irritant in water, the more readily will it dissolve in the moisture of the upper respiratory tract, with consequent irritation of the nose and trachea. As a result, the worker tends to avoid the area where the fumes are present. The less soluble irritants do not dissolve in the nose and throat, and so penetrate deeper into the bronchopulmonary tree. Since there is less irritation of the nose and the throat, the contaminated area is not avoided and poisoning is apt to ensue. Being only slowly soluble, the effects of these irritants are delayed in onset. Thus eight, twelve or twenty-four hours after exposure, dry cough, tightness of the chest, pulmonary edema, hemoptysis and even death may occur.

The oxides of nitrogen are relatively insoluble gases. Thus the effects of their inhalation are latent, and symptoms do not occur until eight to twelve hours after exposure. Nitrogen oxide fumes are apt to be present wherever nitrates are being used. Nitrates are ingredients of explosives, dyes and plastics and are employed as metal-cleaners.

In contrast to nitrous fumes, chlorine and hydrochloric acid, sulfur dioxide and sulfuric acid are extremely soluble and cause immediate irritating action, mainly restricted to the upper respiratory tract. But chlorine and sulfur dioxide, being gases, also invade the alveolar spaces and so may cause pulmonary edema as well. Other fumes of recent interest are those of the fluorides, now being used as coating agents on welding rods. When such rods are melted, fluoride fumes are evolved, and if these are inhaled in strong concentrations, irritation and ulceration of the upper nasal passages occur, and nosebleed is frequent. Fluorine acts like radium or calcium when it enters the system, and is deposited in the bones in a similar manner.[17] Here it sets up a chronic fibrotic reaction, and a proliferated osteitis occurs. The rate of deposition of fluorine in the bones seems to equal the amount that is being put out in the urine. Ten determinations of fluorides in the urine have been made during the past six months at the Division of Occupational Hygiene. Two of them were over the proposed normal limit of 3 mg. per liter[18]; one of the subjects worked in a foundry and the other was a welder.

The last of the irritant gases and vapors to be considered are the aldehydes. Formaldehyde is used in the manufacture of artificial resins and disinfectants. Acrolein is commonly found in proc-

esses where fatty substances are being heated. The aldehydes, being soluble, are extremely irritant to the upper respiratory tract.[19] In high concentrations they are anesthetic.

Metabolic Poisons

Alcohols. Of the aliphatic alcohols, methyl alcohol (wood alcohol) is the most important.[20] It is used as a solvent in varnishes, shellacs, lacquers, gums, dyes, rubber cement and plastics, and is employed in dry cleaning. Methyl alcohol, or methanol, unlike other alcohols, is metabolized slowly and so has a cumulative effect. It enters the system principally by inhalation, but poisoning has occurred by ingestion and probably by absorption through the skin. Some people are markedly susceptible to this poison. Exposure to fumes of methyl alcohol causes burning of the eyes, respiratory tract and skin; followed by headache, fatigue, depression, staggering gait, loss of appetite, nausea, vomiting, abdominal pain and diarrhea. In severer cases, cyanosis, confusion, paralyses and visual hallucinations are apt to occur. Methyl alcohol has a specific toxic effect on the optic nerve; any worker who complains of visual disturbance in addition to gastrointestinal symptoms must be questioned closely concerning his occupation.

Other alcohols are not used in industry to any great extent, but in general it can be said that, within certain limits, as the molecular weight increases the narcotic and skin-irritating properties also increase. Thus amyl alcohol, with the exception of methyl alcohol, is the most toxic of the commonly used alcohols. However, since the volatility decreases as the molecular weight increases, there is less chance of exposure to fumes of the higher alcohols; as a result, only a few cases of industrial poisoning from them have occurred.

Chlorinated hydrocarbons. Of the chlorinated hydrocarbons, only four are of interest here.[21] They are chloroform, carbon tetrachloride, trichlorethylene and tetrachlorethane. The chlorinated hydrocarbons are among the most poisonous of the solvents. They are liver and metabolic poisons and have a marked effect on the nervous system. They cause optic neuritis and atrophy in susceptible subjects, and are also cardiac depressants. In general, the toxicity increases as the molecular weight increases and as the number of chlorine atoms increases.

Carbon tetrachloride has the same structural formula as chloroform, the toxic symptoms of which are well known, except that another chlorine atom has been added.[22] This single structural change makes it less anesthetic than chloroform but more toxic to the liver, kidney, heart and brain. It is now little used in industry, but cases of poisoning from it still occur quite commonly. It may affect the respiratory tract, the gastrointestinal tract, the skin, the liver or the brain. Respiratory symptoms occur when moderate concentrations are inhaled; these include cough, bronchitis, bronchopneumonia, pleuritis, hydrothorax, hemothorax and pulmonary hemorrhage. The gastrointestinal symptoms are anorexia, nausea and vomiting. Carbon tetrachloride is a hyperosmic stimulant; that is, nausea and vomiting may occur without any other toxic symptoms. The liver is often severely inflamed, and there may be yellow atrophy in cases of acute exposure, or cirrhosis in chronic poisoning. Carbon tetrachloride is a depressant and narcotic of the central nervous system. There is often acidosis and a low blood-calcium level in acute poisoning. The acidosis has been ascribed to the absorption of hydrochloric acid, but it may be due to disturbance of the oxidative function of the liver.

Trichlorethylene,[23] the third important chlorinated hydrocarbon, is an unsaturated compound that is noninflammable and a relatively good solvent. It is less irritating to the respiratory tract, less injurious to the liver and less narcotic than most of the other chlorinated hydrocarbons. In low concentrations it creates a pleasant feeling of intoxication, with unsteadiness, confusion, mental dullness, anorexia, nausea, vomiting and fatigue. Constant exposure has led to the development of addiction and has caused retrobulbar neuritis and polyneuritis. In high concentrations this substance is narcotic.

Tetrachlorethane[23] is the only other halogenated saturated hydrocarbon of importance. It is used in lacquers and varnishes. Having a high molecular weight and four chlorine atoms, it may be expected to have marked toxic properties. As a matter of fact, it is probably the most poisonous of the chlorinated hydrocarbons, possessing severe narcotic properties and causing acute yellow atrophy of the liver and a fatty change in the heart and pancreas.

Other organic substances. There are a few other organic substances in use that are rapidly becoming of increasing importance.

One of these is methyl ethyl ketone (butanone).[24] The recent development of synthetic methods of preparation has made it available in commercial quantities, and it is being used in lacquers, cements, varnishes and paint removers and in the manufacture of drugs. It is an irritant to the conjunctiva and nasal mucosa, but as yet no cases of industrial poisoning from it have occurred. In high concentrations it will probably prove to be a pulmonary irritant and a narcotic.

The glycols are aliphatic hydrocarbons with two hydroxyl groups. They are good solvents and are of low volatility. In general, they are narcotic if

inhaled in high concentration. They cause serious kidney damage if ingested.

The cellosolves are ethers that are derived from the glycols.[25] They also contain an alcohol radical and retain many of the characteristics of ethers and alcohols. They are irritants and depressants of the central nervous system. They are excellent solvents for cellulose, natural resins, acetate lacquers and enamels. Chronic exposure causes headache, dizziness, stomach disorders, psychotic symptoms, mental retardation and polyneuritis. Anemia, thrombocytopenia and granulocytopenia have been reported from exposure to these solvents.

Aromatic compounds. Last come the aromatic compounds, comprising benzene and its derivatives.[15, 21] Benzene is an excellent solvent for rubber, cellulose, gums, resins, fats and oils, and is used as an ingredient of many paint removers. It is an anesthetic and is a depressant to all the elements of the bone marrow. Chronic exposure causes anemia, leukopenia and thrombocytopenia. Benzene poisoning can be suspected when the white-cell count is persistently under 5000 and the red-cell count under 4,000,000 in a person exposed to benzene vapors. Change in the urine sulfate partition is one of the best diagnostic criteria for benzene exposure.[26] Normally 90 per cent of the urine sulfate is in inorganic form and 10 per cent ethereal. After exposure to benzene, the percentage of ethereal sulfate tends to increase. When it becomes 50 per cent of the total, benzol poisoning can be suspected.

The introduction of methyl groups to the benzene ring gives toluene and xylene. There is no unanimity of opinion regarding the toxicity of these substances, but it is generally thought that they are more narcotic but less hemotoxic than benzol. In any event, they are less apt to be found in toxic concentrations in industrial plants, and so have been recommended as solvents in place of benzol for many purposes.

By the introduction of an amino group into the benzene ring, aniline is formed. It is used as an intermediate in the manufacture of drugs, dyes, resins, inks and rubber accelerators. Aniline and its immediate homologues affect the blood and the central nervous system. The main portal of entry is by way of the skin, and only a few cases of poisoning have occurred by inhalation. In acute poisoning, one sees weakness, somnolence, headache, vertigo, convulsions and even death.[27] In chronic poisoning, the most striking effect is on the blood. There is hemolysis of the red cells, as well as the formation of methemoglobin. Cyanosis is commonly seen in workers with aniline. The white cells ordinarily show little change, but there may be depression of all the bone-marrow elements, as in benzene poisoning. Bladder tumors have been reported.

The toxicity of the aminobenzenes can be best remembered by recalling that the sulfonamides are among them. Acetanilid is another aniline derivative. These drugs cause confusion, loss of appetite, nausea, vomiting, methemoglobin formation and many other well-known toxic signs and symptoms. It is therefore unnecessary to memorize the symptoms and signs of aniline poisoning, for the picture is similar to that seen in poisoning from the sulfonamides and the antipyrine group of drugs.

The nitrobenzenes are also hemolytic poisons and depressants of the central nervous system.[28] Like aniline, they can be absorbed through the skin. They are extensively used in the manufacture of explosives.

Trinitrotoluene, one of the nitrated aromatic compounds, is also absorbed through the skin. It has been reported to have caused cyanosis, methemoglobinemia, chronic gastritis, anemia and jaundice. It causes yellow discoloration of the skin, hair and nails and is a skin irritant.

The chlorobenzenes are extensively used in moth balls and also in anti-moth sprays for furs and other clothing. The chlorobenzenes are probably more narcotic than benzene but less hemotoxic. Jaundice, kidney damage and methemoglobinemia have been reported from exposure to them. Since some of the chlorobenzenes are solids, one should inquire concerning the solvent used in commercial liquid preparations; chloroform, carbon tetrachloride, benzol and carbon disulfide are frequently employed and are toxic in their own right.

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This concludes the discussion of the common toxic dusts, fumes and gases encountered in industrial practice. With the increasing employment of inexperienced young and old workers, it is imperative that all physicians be on the alert for illness due to industrial exposure, for only by the early diagnosis of such illness can the men at the front lines be supplied with the necessities of an all-out war.

23 Joy Street

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THE CONDITIONED REFLEX AS A TREATMENT FOR ABNORMAL DRINKING

Its Principle, Technic and Success

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NO OTHER disease is so widely spread or so detrimental from the medical, sociologic, legal, economic or any other point of view as is chronic alcoholism. The experience that will power and good intentions on the part of the unfortunate alcoholic patient are in most cases as inefficient as a pledge led physicians, and especially psychiatrists, to look for another, more promising cure. Unfortunately, all the usual types of therapy — hospitalization (voluntary or by commitment), "alcoholic farms," sedation, vitamins, gold injections, amphetamine (Benzedrine) and even psychotherapy, inclusive of psychoanalysis — have proved to be of help in not more than 15 to 25 per cent of the cases so treated. A proportion of cures of 50 to 75 per cent claimed for any form of therapy can easily be reduced to a more accurate figure by asking what period of total abstinence without relapses is meant by "cure," and how many records of patients can be produced.

Everyone is familiar with the fact that the ingestion of tainted food causes sickness, disgust and abhorrence for this kind of food for a long time. The sight, smell, taste or even thought of it makes one sick. Moreover, the inability to take good, untainted food resembling it in appearance, smell or taste may last for weeks, months or years. A physiologist would describe the mechanism of this phenomenon thus:

> The toxic product of protein decomposition, ptomaine, or the exotoxin produced by *Clostridium botulinum* is the unconditioned stimulus causing the unconditioned reflex response of sickness and vomiting. The meat or fish is the conditioned stimulus that is able to elicit later the conditioned reflex of vomiting even after omission of its real, original cause.

By substituting for the toxin (unconditioned stimulus) an emetic and for meat (conditioned stimulus) an alcoholic beverage, more or less at the same time there will be developed, after a period of treating or conditioning, the conditioned reflex of emesis whenever alcohol is seen, smelled or tasted. Simple as this principle sounds, it is difficult or impossible to accomplish the desired results without knowledge of all the peculiar characteristics of a conditioned reflex. That is why so many attempted forms of treatment based on this idea have been unsuccessful.

The earliest scientific attempt at treating alcoholic patients by using an emetic as an unconditioned stimulus was made in 1933 by two Russian physicians, Sluchevsky and Friken.[1] The emetic used by them was apomorphine. Seven patients were treated. On only one of them, however, were continued observations made. This patient was reported as having developed the conditioned reflex several weeks after the treatment was completed. Several therapists reported subsequently on apomorphine as the unconditioned stimulus. The number of patients in all cases was small, the largest group being 36, mentioned by Fleming,[2] who estimated 25 per cent of perma-

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nent cures. He thought, however, that the sincere co-operation of the patient was essential for success, and that almost any method of treatment would be successful with this type of patient.

There is an old treatment with a familiar name that is based on the right principle. However, it fails because of a faulty technic. In it, the emetic is added to the alcoholic drink. The alcohol is soon absorbed and the patient is partly intoxicated — that is, narcotized — at the time when the emetic acts. Pavlov proved that no conditioned reflex can develop in a narcotized subject. Further, the emetic used in this cure has two bad complementary aftereffects: a euphoric and a hypnotic one. The result of the euphoric state is that the patient, instead of feeling sick after the treatment, feels "fine," which does not promote development of the reflex of abhorrence and nausea. The hypnotic aftereffect causes a sound sleep for several hours, with subsequent amnesia, which also is not conducive to the desired results.

Finally, however, after years of research and experimentation, the right kind of emetic (emetine), with all the desired properties and none of the disturbing ones, was selected and a careful and skilful technic was devised. Voegtlin and Lemere[3-5] have practiced this treatment for six years. They use a solution of 50 gr. of emetine (an alkaloid of ipecac), 25 gr. of pilocarpine and 23 gr. of ephedrine in 40 cc. of water, 0.4 to 1.0 cc. of which is injected intramuscularly 4 to 12 minutes before a drink is given to the patient. In accurate follow-up reports on 1194 patients they give the following results[6]: 74.8 per cent of 644 patients treated for less than two years were still abstinent; 52.5 per cent of 291 patients treated from two to four years ago were still abstinent; and 51.5 per cent of 259 patients treated four or more years ago were still abstinent.

For successful conditioned-reflex therapy, all extraneous auditory, olfactory and visual stimuli must be eliminated and the conditioned stimuli emphasized.

The elimination of auditory extraneous stimuli is achieved by a soundproof treatment room and by avoiding conversation during treatment. The positive auditory stimuli are purposely exaggerated — the clinking of bottles and glasses, the gurgling sound of liquor being poured into glasses and the sounds of retching and vomiting.

Undesirable visual stimuli are all furniture and articles in the treatment room that are not essential for the treatment. The room should be painted a plain dull color and contain a comfortable chair for the patient and another for the therapist, and a bar or table with liquor and beer bottles and glasses on the spotlighted top. The necessary medical supplies (syringe, emetic solution and so forth) should be on a shelf of the bar or table invisible to the patient.

Olfactory stimuli that may vitiate the treatment are odors arising from the kitchen, laboratory, medicine chest (paraldehyde) or lavatory. Conditioning olfactory stimuli are emphasized by having the patient smell of the glass before and after the drinking. As the pilocarpine used in the emetic increases the secretion of nasal mucus, the patient should be reminded to blow his nose frequently.

No food and no sedatives should be given within twelve hours before treatment. Any narcotizing agent (alcohol, barbiturates, bromides, chloral hydrate and so forth) taken after the treatment counteracts the conditioning; stimulants like amphetamine (Benzedrine) further it.

The treatment sessions are given four to seven times on successive days and repeated once after one, two, three, six, nine and twelve months during the first year.

It is well to keep in mind that the treatment should be used in common with psychotherapy and social therapy in order to eliminate the extrinsic and intrinsic factors that cause or contribute to drinking.

The results of the treatment depend largely on the selection of patients suited to this type of therapy; patients with psychopathic traits and those whose attitude lacks sincerity and co-operation are apt to be failures.

Conditioned-reflex therapy as practiced at the Washingtonian Hospital differs from the treatment employed by Voegtlin and Lemere in the formula of the emetic solution used and in the after-therapy. It was found that when pilocarpine and ephedrine were given in the amounts used in their treatment, the patients developed spasms of the urinary bladder and intestinal tract. This not only was painful, but because the treatment had to be interrupted to relieve the spasm, the mind of the patient was diverted and the conditioned-reflex therapy was thereby lessened in effect. Furthermore, probably owing to the large amount of pilocarpine used, the patient complained of blurred vision of sufficiently severe degree to make it difficult for him to read even the labels on the bottles on the treatment table. This produced in him fear of definite visual damage and again his mind was diverted from the treatment. On the other hand, the dosage of ephedrine was not sufficiently high to prevent the drop in blood pressure that emetine usually provokes. It was found that the systolic blood pressure of the majority of patients, measured in the morning before treatment, is 100 or less. Thus emetine when superimposed on the

customary low blood pressure in the majority of chronic alcoholic patients may cause dangerous shock. For these reasons the amount of pilocarpine in the stock solution was reduced to 15 gr. and that of ephedrine increased to 30 gr. It was also found that if ephedrine was given an hour before the treatment, sometimes the effects wore off and the blood pressure fell, owing to the combined effects of the emetine and the lapse of time. For this reason it proved preferable to increase the amount of ephedrine in the solution given, rather than to administer it beforehand.

The after-therapy practiced in this hospital varies from the Voegtlin and Lemere treatment in the following particular. It is believed that psychotherapy, carried out on the traditional intellectual level and, even more important and efficacious, on the emotional level, is of great value as an adjunct to drug therapy. It was found insufficient for the patient to return at intervals of one, two, three, six, nine and twelve months for reinforcement therapy. Contact with the hospital and with the physician is inadequately maintained unless the patient sees the doctor and returns to the hospital environment at regular weekly intervals. Only by coming back frequently is the bond between the patient and the physician strengthened and the psychologic impression of both the physical and the psychical strain accompanying the conditioned-reflex treatment maintained. By supplementing the monthly periods of reinforcement by weekly visits, the patient is prevented from slipping into the delusion of the conviction that he can take a social drink without relapsing. By frequent visits, moreover, he is kept in the mental attitude of a patient still under treatment. His approach to the reinforcement therapy thus has less psychic shock and he dreads the treatments less than would be the case if a month or more had gone by before he came to the hospital again. The patient is therefore urged to spend his week ends and other free time within the hospital for a period of several weeks and, if possible, months, in addition to returning for reinforcement treatments.

Although conditioned-reflex therapy, employing the technic described, has been in operation in this hospital for too short a period (seven months) for the results to be conclusive, the number of successful treatments is extremely gratifying. Of 43 patients treated, 27, or 63 per cent, have been entirely abstinent since treatment, which represents the longest period in their lives of freedom from drinking. It is thought that this figure shows that the treatment has been efficacious and is worthy of further trial.

Summary

The use of the conditioned reflex in the treatment of chronic alcoholism is discussed, and its apparent success in a small series of cases is described.

41 Waltham Street

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CLINICAL NOTE

VARICELLA FOLLOWING EXPOSURE TO HERPES ZOSTER

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VON BOKAY,[1] in Budapest in 1892, first made note of an apparent relation between herpes zoster and varicella; he[2] reported further cases in 1909. Since that time the clinical relation between the two diseases has been repeatedly, even if not frequently, noted.

Among the more recent reports is that of Blatt, Zeldes and Stein,[2] who in 1940 published 2 case histories from the Children's Division of the Cook County Hospital. In the first, a bedridden child in the tuberculosis ward developed herpes zoster eleven weeks after admission. Thirteen days later a contact who had had no other exposure for a year developed varicella, and thirteen days later a third child developed varicella after exposure to the second child. In the second case two children developed varicella fourteen and eighteen days after exposure to a nurse with herpes zoster. This nurse had previously had chicken pox. It is of interest that no generalized epidemic followed either of these incidents.

Weigand,[3] in 1942, reported two siblings who developed typical chicken pox two weeks and four weeks respectively after exposure to a grandmother suffering from herpes zoster. Presumably the second child, with a severer infection, developed the disease as a result of contact with the first. There had been no other exposures.

In the interest of adding further presumptive evidence of an infectious phenomenon not commonly seen and not as yet universally accepted to that already accumulated, the following cases deserve brief mention.

The mother of two children, a daughter, aged 8, and a son, aged 6, first noticed soreness of the left side of her throat on January 23. By January 28 pain and swelling of the left side of the face had developed, and on January 30 a typical eruption of herpes zoster appeared in this area. She had had varicella in childhood. Fourteen days after her first symptoms had appeared, the son showed the scattered papules of an eruption that became well-defined varicella 24 hours later, and on the following day the husband and the daughter broke out with typical, moderately severe chicken pox. No known exposure to chicken pox had occurred for any of the three. The daughter had been confined to the house with a cold since the beginning of her mother's illness, and no cases had occurred in the small school group of which the son was a member.

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The literature on the zoster-varicella relation was reviewed by Bruusgaard[4] in 1932, and by Blatt, Zeldes and Stein[2] in 1940. As a result of the lack of exact knowledge about so many of the aspects of virus infections, there continue to exist two schools of thought concerning their relation. The dualists, represented chiefly by Comby,[5] believe in two separate and distinct viruses as the etiologic agents of the two diseases. The monists, including von Bokay,[1] Netter and Urbain,[6,7] Lipschutz and Kundratitz,[8] Kundratitz,[9] Bruusgaard[4] and others, believe that the two infections are caused by the same virus with the faculty of undergoing mutation in regard to infectivity and tissue affinity, changing from a neurotropic form in herpes zoster to a dermatotropic form in varicella. Goldsmith[10] is responsible for the statement that persons develop varicella following exposure to herpes zoster ten times more frequently than do those following exposure to varicella.

The arguments of the dualists are based on the differences between epidemiologic and immunobiologic conditions obtaining in the two diseases. Varicella, for instance, leaves a pronounced immunity, whereas not infrequently patients who have had varicella later develop herpes zoster. Varicella is a disease of childhood, whereas herpes zoster rarely attacks children, its highest incidence being in the sixth decade. Varicella is highly communicable, but herpes zoster is only slightly so. Cantor,[11] moreover, in twenty years on a Pacific island saw much herpes but no varicella, whereas Storen[12] had a similar experience in Norway.

The theory of monism is based not only on the clinical evidence supplied by cases of varicella apparently resulting from exposure to herpes zoster, but on considerable experimental work as well. Thus various investigators, notably Netter and Urbain,[6,7] have demonstrated by complement-fixation tests that serums of patients with these diseases contain identical antibodies. This, of course, may be only the expression of a group reaction between closely related although nonidentical viruses, but it is a challenging observation.

It is of interest that the same complement fixation occurs with so-called "symptomatic" herpes zoster, such as that sometimes appearing after the introduction of arsenic or bismuth, or following smallpox vaccination. In these cases the reaction is probably due to the activation of a latent virus by factors acting as *agents provocateurs*. This is consistent with the property of latency apparently possessed by the viruses of herpes, both zoster and simplex.

Inoculation with the fluid from zoster vesicles has been reported by Lipschutz and Kundratitz[8] and by Bruusgaard.[4] Lipschutz and Kundratitz found that some subjects developed only local reactions, and some a generalized varicelliform eruption as well. Children who had recovered from varicella were immune to zoster inoculation (although not necessarily immune to herpes zoster in adult life), and children who had recovered from natural or experimental herpes zoster were immune to inoculation with varicella fluid; moreover, serum from subjects convalescing from herpes zoster could be used as a protection against varicella.

Examining tissues histologically, Bruusgaard found that the varicella-like lesions resulting from inoculation with herpes zoster fluid show the same microscopic picture as that of the vesicles from ordinary herpes zoster or varicella, accompanied by degeneration of the epithelial cells with vacuolation and oxyphile elements in the nuclei, and multinucleated cells.

Bruusgaard's own cases comprise five series, each series having been inoculated from a different case of herpes zoster. Eight out of a total of 18 children showed positive takes seven to nine days later. In 4 of these there was only a reaction at the site of the inoculation. In the other 4 cases a generalized exanthem indistinguishable from varicella appeared fourteen days after inoculation, in addition to the local reaction. All positive results were in children under five years of age. A considerable number of secondary cases of varicella, all comparatively mild, occurred among children exposed to the inoculated group.

It is apparent that the proponents of the theory of a single, mutable virus for herpes zoster and varicella can present strong evidence to support their claims, even if exact proof is lacking. Thus the generalized eruption of herpes generalisatus, indistinguishable from varicella, assumes special interest as the best evidence available that the neurotropic virus of herpes zoster may also show definite dermatotropism.

Zinsser,[13] in developing the thesis that many examples exist in nature in which modifications of virus seem to have developed spontaneously, points to the relation between herpes zoster and chicken pox as a likely one, and Sabin,[14] discussing the neurotropic virus diseases of man, alludes to the strong possibility that herpes zoster and varicella may be manifestations of the same virus.

As Bruusgaard concludes:

> The same difficulties arise here as are encountered in the interpretation of the reciprocal relations between the different types of other ultramicroscopic viruses, to meet which difficulties we try in the meantime to seek assistance from speculation and theories. The reasons for this, as Doerr emphasizes, are sufficiently clear, namely, the fact that none of these infective substances have been identified morphologically, and that they have not proved culturable in the laboratory.

Summary

Three cases of varicella following exposure to a case of herpes zoster are reported, and the relation between varicella and herpes zoster is discussed.

266 Beacon Street

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MEDICAL PROGRESS

RECENT ADVANCES IN TESTOSTERONE THERAPY*

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MUCH has been learned of the effects and therapeutic usefulness of testosterone since the previous review on this subject by one of us (J. C. A.[1]) in 1940. Newer concepts of its physiology and wider clinical experience warrant, perhaps, another summary of the knowledge concerning this important endocrine substance.

Physiology

The history of the discovery and isolation of the male hormone has recently been well summarized.[2] Testosterone, first synthesized by Ruzicka and his associates,[3] in 1935, is apparently identical with the hormone of the interstitial cells of the testicle. Its most striking effects, manifested naturally in the normal adolescent male or artificially by the administration of the hormone to patients with testicular deficiency, are already well known. They consist of a development of secondary sex characteristics, and a growth of the penis, scrotum, prostate and seminal vesicles; the appearance of hair on the pubis, face and other areas of the body; a deepening of the voice; and a development of the masculine behavior patterns of aggressiveness, vigor and self-confidence.

The relation of testosterone to the various endocrine organs is in need of further clarification. Like the secretions of the other peripheral endocrine glands, testosterone appears to exert a specific inhibitory action on the pituitary gland.[4–6] In females and eunuchoid males treated with testosterone, there is a decrease in the excretion of the gonadotropic hormone of the pituitary.[7–9] In studies on women it was found that the administration of testosterone inhibits follicle formation, ovulation and the formation of the corpus luteum in the ovary, probably through its effect on the hypophysis.[5] These effects occur with large doses of the drug, but smaller amounts of testosterone exert a stimulating effect on the adrenal, thyroid and parathyroid glands and on the ovary as indicated in animal experiments.[10] It appears to be a not unusual occurrence that small amounts of the target glands stimulate whereas larger amounts inhibit the anterior pituitary gland.

Recent investigation has increased appreciation of the role that testosterone plays in the metabolism of the body as a whole. Many have observed an increased basal metabolic rate under the influence of testosterone,[11–16] and one group[15] by showing a lowering of the respiratory quotients suggests that it may effect a greater oxidation of fats. Like other steroid hormones, testosterone has been observed to cause a decreased excretion of electrolytes and water.[15, 17, 18] A definite retention of phosphorus and nitrogen occurs during its administration,[12, 18–20] and to a greater degree than can be explained by the genital hypertrophy. This is taken to be an indication of a generalized increase in musculature, a view that is further strengthened by the finding of increased excretion of creatine in treated patients[20, 21] or paralleling a rise in urinary androgen in children.[22] Patients with hypogonadism treated with androgens also exhibit a marked increase in endurance and the ability to perform static and dynamic work,[23, 24] although this effect is not produced in normal men.[21] This is of interest inasmuch as it goes far to explain the greater musculature of the males of most species, particularly strikingly shown in the male deer during the season of testicular hypertrophy and activity. These findings of the important role that testosterone plays in nitrogen metabolism and growth of muscle and bone form one of the most promising developments of recent endocrine investigation. Their therapeutic implications have already been realized in the treatment of retarded growth, but more widespread usefulness should certainly be discovered in the near future. An unexplained lowering of glucose tolerance and a decrease in liver glycogen have been reported during the administration of methyl testosterone.[11, 13]

Any clinician who has observed the delicate, light skin and the vasomotor instability of eunuchoid patients has been impressed with the importance of testosterone to the skin and vascular system. These clinical impressions are confirmed by studies that show a decreased excitability[25] and an increased velocity of blood flow[15] in vessels after testosterone administration. An increased

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permeability of the capillaries in the rat uterus and vagina has been reported.[26] The possibility that the sex hormones and the androgen : estrogen ratio are related to the occurrence of acne vulgaris has been discussed,[27, 28] although their mechanism is still to be understood. The predominant occurrence of this disease in adolescent boys and the good reports with estrogens as therapy[29] suggest that relative increase of testicular secretion plays some part. This is confirmed by the not infrequent appearance of acne in eunuchs treated with testosterone. It is not certain that this reaction is dependent on the androgen : estrogen ratio, but it must be recalled that boys and girls excrete both 17-ketosteroids and estrogens, with only a variation in quantity to differentiate the sexes.[30] An interesting property of testosterone is its ability to produce a significant increase in red cells and hemoglobin in eunuchoid individuals.[13, 31]

Methods of Administration

Few substances equal testosterone in the variety of routes whereby it may be effectively administered. The classic route—by intramuscular injection in the form of testosterone propionate in oil—still has much to recommend it. Its effects are rapid and sufficiently sustained to require only two or three injections per week. It was soon found, however, that testosterone and its derivatives, like some other steroid hormones, are absorbed through the skin, and many have advocated their administration by inunction.[32–35] Although the dose required compares favorably with that of intramuscular injection, the type of base used has a great deal to do with the effectiveness of absorption.[36] In our experience this type of therapy has not been extremely successful, and neither generalized nor local effects have been spectacular.

In an attempt to effect a slow and physiologic absorption of this hormone with a minimum of inconvenience, some have used the technic of subcutaneous implantation of sterile pellets of testosterone and its derivatives, such as the propionate.[34, 37–41] Studies of the absorption rates of such pellets demonstrate that both testosterone and the propionate ester are relatively well absorbed.[42, 43] This confirms the clinical impression that effects may be exerted for periods of weeks to several months. Although this technic is far more economical with respect to the necessary quantity of the hormone, it has been deemed unsatisfactory by some,[44, 45] and others have found that the implants occasionally slough[46] or become infected.[41] On the whole, however, this technic has been recommended as easier than continuous injections, and some prefer it to the ingestion of tablets. It has the advantage of a constant, rather slow, absorption rate.

The recent development of methyl testosterone offers a form of the drug that is clinically effective when taken by mouth. Except for a few dissenting voices,[45] investigators are agreed on the efficacy of this form of administration.[14, 23, 33, 34, 40, 47–50] In our experience it works particularly well in stimulating body growth and development. There are apparently no side effects except for occasional mild gastric distress, easily relieved by alkalies. This drug is said to cause less hirsutism in the female, though we have certainly seen it develop; it produces all the other anatomic changes produced by testosterone parenterally. The only objections to the oral use of methyl testosterone are its comparative expense, since considerably more than the parenteral dosage is required, and the fact that its effects develop somewhat less rapidly. The sublingual route has been used successfully for the administration of testosterone and its derivatives.[51]

Indications

Diseases peculiar to males. In this group of diseases one finds the most physiologic and rational indications for testosterone therapy. Favorable and usually dramatic results are achieved with replacement therapy in all types of *adult testicular failure*.[40, 41, 50, 52–56] Beneficial effects become evident in the first week and improvement continues during treatment. Infantile genitalia enlarge except for the testes, erections and ejaculations occur, the growth of masculine hair is stimulated, and eventually a beard may develop. Increase in virility is reflected in changes in body contour, enlargement of the larynx with a deepening of the voice, and changes in the skin and musculature. Either as a direct result of the hormone or indirectly by virtue of the encouraging changes, the emotional status improves, and there is increased confidence and aggressiveness and greater emotional stability. There is reason to mention, however, the opinion of Pullen and his co-workers[52] that before employing substitution therapy in this condition an accurate diagnosis should be established; he even suggests that a preliminary trial of pituitary gonadotropic hormone be made. Despite favorable results with testosterone in *delayed puberty*,[57, 58] Hamilton[59] has made the warranted suggestion that such treatment is unwise. He believes that substitution therapy can well wait a few years until it is obvious that testicular function will not begin naturally. This suggestion has merit, for testosterone stimulates only secondary sex characteristics, having no effect on the development of the testicle or of spermatozoa. In fact, in large doses it may inhibit such development. In

cryptorchidism, testosterone alone or combined with gonadotropic hormones has enjoyed some success,[57, 58, 60] and probably deserves a trial before surgical intervention. Likewise, in *benign prostatic hypertrophy* some reports on the use of testosterone are favorable,[61–64] although one group[64] found no improvement in urinary symptoms. In view of the finding of decreased androgen excretion in cases with prostatic hypertrophy,[65, 66] the use of testosterone in this condition is not irrational, and it is possible that it might be of value in early cases and poor operative risks. Further confirmation of this viewpoint appears to be needed. The use of testosterone in *male sterility* appears to us to be questionable,[67, 68] although in one reported case of sterility associated with hypogonadism there was an increase in the number and motility of spermatozoa and two pregnancies apparently resulted from its use.[46] Most reports on the effect of testosterone in *functional impotence* are discouraging,[46, 56, 69–71] but a favorable result has been reported with testosterone and gonadotropin combined.[72]

Gynecologic conditions. In a wide variety of diseases peculiar to women, the male hormone has found useful clinical application. In *mastodynia* its use has met with success,[45, 73–75] and Nathanson[73] has found it more effective than the estrogens. *Postpartum engorgement of the breasts* responds well to testosterone,[76, 76–78] but dosage should be moderate (8 mg. daily by inunction or 60 mg. of methyl testosterone by mouth for two days, beginning on the second to the fourth postpartum day). Abarbanel[79] finds that moderate dosage does not suppress lactation. One group[80] found testosterone of little or no value in this condition, but they employed small doses of testosterone propionate. To achieve *inhibition of lactation* some have found testosterone useful in large doses (75 mg. intramuscularly, 90 mg. of methyl testosterone orally per day).[74, 77, 81]

Those who have used the male sex hormone in the treatment of *functional uterine bleeding* have secured very favorable results that in many cases persist after the treatment is discontinued.[44, 45, 74, 82–85] Temporary regression in the size of *uterine fibroids* has been observed.[39, 84, 86] Encouraging results have been reported with the use of testosterone or methyl testosterone for symptoms of the *menopause*,[45, 74, 75] and in some individuals we have found it more effective than the estrogens. Moderate doses of testosterone given for two weeks preceding menstruation are reported to relieve *premenstrual tension*[35, 74] and certain cases of *functional dysmenorrhea*.[35, 45, 74, 75] Beneficial effects have been reported with the androgens in a host of other gynecologic conditions including *afterpains*,[74] *pelvic inflammatory disease*,[87] *nocturia* from various causes[88] and *nymphomania*.[89] In an experimental study of a case of *endometriosis*,[90] the symptoms were controlled by large doses of testosterone but with the production of disagreeable side effects.

General diseases. Testosterone, like most new drugs, has been tried in a variety of conditions, not always on the soundest physiologic basis. Many such trials have given surprisingly favorable results. In view of the widespread physiologic effects of testosterone, which have been discussed in an earlier part of this paper, it is perfectly possible that the male sex hormone may exert a beneficial action on systems other than the urogenital tract.

Testosterone, alone or combined with gonadotropins, has been used and is recommended in cases of *retarded growth*,[46, 91–93] where it produces marked increases in growth rate and bone development.[19, 91, 94] Conversely, it has been reported to be useful in arresting *abnormally rapid growth*.[92, 95] In our experience with a large number of adolescents with retarded growth the effect of prolonged use of methyl testosterone has been striking, indeed far better than that achieved with any other therapy. Although the response is more marked in the first six months of therapy, there continues to be a satisfactory growth for many months thereafter. To achieve these effects, however, it is essential that the bone epiphyses be open. It is not surprising, perhaps, that better results are obtained in children who have not an inheritance of small stature.

In a host of psychoses, testosterone compounds have been used with varying degrees of success. Cases of *agitated depression*[96] and *atypical involutional psychoses*[97] have responded encouragingly to testosterone. Both good and poor results have been obtained with testosterone in *male involutional psychoses*.[98, 99] One patient with *schizophrenia associated with hypogonadism* made a striking recovery with androgens,[100] but the physical abnormalities may have had a major share in the patient's mental derangement. In the same manner, *behavior problems in adolescence* when associated with hypogonadal states tend to disappear after the physical inferiority has been improved with testosterone.[58] Because of the frequent remissions and relapses that may occur spontaneously in most psychoses, one must await better controlled studies, larger series of cases and longer periods of observation before venturing to appraise this aspect of testosterone therapy.

Various *dermatitides associated with senescence* in males have responded to androgen therapy after other treatment had failed.[101] An interesting ap-

plication of testosterone is its recent use in certain disorders of the vascular system. In *essential hypertension* and *peripheral vascular disease*[102] sufficient improvement has been reported to warrant further investigation.[102] Lesser,[103] Bonnell and others,[104] Hamm[105] and Walker[102] all report good results in the treatment of *angina pectoris* with testosterone, although such treatment did not prevent the occurrence of a coronary occlusion in one patient.[102]

Two patients with *myotonia atrophica*, associated with testicular atrophy, responded markedly to testosterone treatment, whereas a patient with no testicular involvement did not improve.[106]

Possible Harmful Effects

The conscientious physician before employing a new drug wants to be informed of the deleterious effects that may attend its use. Permanent harm resulting from the moderate use of testosterone remains to be demonstrated. It must be remembered, however, that the synthetic androgens are comparatively new and have had only a limited clinical trial.

Some have warned against the use of testosterone in growing persons on the ground that it may cause premature epiphyseal union and consequent dwarfing.[107] Pullen and his group[52] found no advance in bone age in children who received 30 mg. of testosterone propionate weekly, although when 75 mg. was administered per week such changes did occur. Others in fairly large series found no evidence of epiphyseal closure or advance in bone age.[57, 91, 94]

Moore[108] has stated that the administration of androgens to males with normal testicles may be harmful; and indeed, decreases in number of spermatozoa and in ejaculation volume have been noted.[56, 107, 109] Such observations emphasize the need for a definite diagnosis of diminished testicular function before employing substitution therapy in the form of testosterone and condemn its indiscriminate use in normal man. Eidelsberg and Ornstein[110] have shown that in eunuchoid males testosterone treatment may be employed over long periods of time without ill effect. Gynecomastia has occasionally been observed in males during testosterone therapy,[50, 56] but in our experience this effect is only transient and disappears with reduction or elimination of the drug.

In females receiving androgenic therapy, the commonest untoward effects are the appearance of hirsutism, deepening of the voice and hypertrophy of the clitoris.[45, 67, 75, 83, 84, 86, 90, 111] The change in voice remains, though these other effects are transient and regress if treatment is immediately stopped. It is occasionally noted that the increased hirsutism remains after discontinuing the drug, but this is not easy to evaluate. Moreover, with dosage below 250 mg. of testosterone propionate per month, such effects are extremely unlikely.[82] Acne,[84] weight gain[84] and increased libido[45] are occasional and transitory side effects in women. Increased libido may be marked in castrated women. Wollner[112] has reported a proliferative change in the cervical mucosa resembling carcinoma in a patient with chronic cervicitis who received fairly large doses of testosterone propionate.

Dosage

With so many effective routes of administration available to the physician, each with its advantages and drawbacks, it is difficult to recommend one above another. Dosage and form of administration will vary depending on the economic status of the patient, age and sex, and the condition that is being treated. A standard treatment regimen may, however, be suggested, to be changed in accordance with individual factors. It might consist of intramuscular injection of testosterone propionate in doses of 20 to 25 mg. three times weekly until the desired effects are produced, then substitution of maintenance doses of 10 to 40 mg. daily of methyl testosterone by mouth. Children should not receive more than half the adult dose, and in the case of women it is well to keep below a total of 300 mg. per month in order to avoid the masculinizing effects that are good evidence for reducing the amount of the drug. Where different dosage has been suggested for specific conditions, we have endeavored to include it in the discussion.

Summary

Testosterone is a synthetic and as yet fairly expensive product identical with a testicular hormone. Its most dramatic therapeutic effects are seen when it is used in the form of physiologic replacement therapy in true testicular failure, but it has been shown to have beneficial effects in other diseases. Its evaluation in many of these conditions must await further investigation. There is as yet no evidence of permanent harm resulting from its moderate and clearly indicated usage.

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MASSACHUSETTS MEDICAL SOCIETY

PROCEEDINGS OF THE COUNCIL

Stated Meeting, February 3, 1943

A STATED meeting of the Council of the Massachusetts Medical Society was called to order by the president, Dr. George Leonard Schadt, at 10:30 a.m., on Wednesday, February 3, 1943, in John Ware Hall, 8 Fenway, Boston; 175 councilors (Appendix No. 1) were present.

The Secretary offered the record of the meeting held October 7, 1942, as published in the *New England Journal of Medicine*, issue of November 12, 1942, and moved its adoption. This motion was seconded by Dr. Peirce H. Leavitt, Plymouth, and it was so ordered by vote of the Council.

The report of the Auditing Committee for the year ending December 31, 1941 (Appendix No. 2) was presented by Dr. LeRoy A. Schall, West Newton, chairman. Dr. Schall explained that this report was not offered in February, 1942, because the accountant's report had not been received sufficiently early to make this possible.

He spoke of having approached the Treasurer with a view of learning what the duties of the Auditing Committee were. He quoted the latter as having said that it was not necessary for the Auditing Committee to appear before the Council. A statement signed by the committee and addressed to the Council, to the effect that the latter had examined the accountant's report, was all that was necessary. Dr. Schall moved the adoption of the report. This motion was seconded by a councilor, and it was so ordered by vote of the Council.

The report of the Auditing Committee for the year ending December 31, 1942 (Appendix No. 3), was presented by Dr. Burton E. Hamilton, Brookline, in the absence of Dr. Francis C. Hall, Brookline, chairman.

The report spoke of the duty of the Auditing Committee to require the examination by a certified public accountant of the assets and liabilities of the Society as represented by the Treasurer's books and accounts, and said that this duty had been fulfilled. The report continued to say that the members of the committee had talked with the Treasurer *pro tempore* and had been assured by him that the examination had been thoroughly made and that to this extent the accountant's examination had been "verified" by the committee. The report added that if this represents the total obligations of the Auditing Committee, its work has been done. If, on the other hand, it is the duty of the Auditing Committee to afford assurance to the Council that the finances of the Society are adequately protected, the committee has not fulfilled its obligations, although it has been given assurance that auditing committees in the past have confined their efforts to what the present committee has done.

There were four specific recommendations contained in the report: first, that the investment of the Society's funds should be under the direction of a professional investment company; second, that the report of the accountant should be more com-

plete and include a list of investment transactions; third, that the latter should include a statement that the report of the fiscal year is reconciled with the report of the preceding year, and fourth, that the duties of the Auditing Committee be turned over to a business man trained as a bank examiner.

It was moved by Dr. Hamilton that the report be accepted. This motion was seconded by a councilor and it was so ordered by a vote of the Council.

It was moved by Dr. Francis P. Denny, Norfolk, that the recommendations contained in the report be referred to the Executive Committee. The motion was seconded by a councilor and it was so ordered by vote of the Council.

The Treasurer's report (Appendix No. 4) was offered by Dr. Eliot Hubbard, Jr., treasurer *pro tempore*. This report contained the following interesting information: the revenue of the Society from resident dues in 1942 was $49,182.39 as compared with $49,779.00 in 1941 and $1738.25 from nonresident dues as compared with $1670.75 in 1941. The total revenue from dues in 1942 was $50,920.64.

Other revenue to the Society was $3932.12 from invested funds (not including the Building Fund); $17.30 from sales; $288.65 from profits from the sales of securities; $3287.75 from the sales of booths at the Annual Meeting; $139.80 from subscriptions to the *Journal* from fellows in the service and $558.00 from censors' examinations. This represents a total revenue of $59,144.26, an increase of $1444.96 over 1941. The income from the Building Fund was $1844.19 plus $72.66, the latter representing a profit from the sale of securities. The total Building Fund now stands at $63,991.80. In 1942 the Society's total expenses were $48,680.84. The unexpended revenue for the same year was $10,463.42. This compares with a total expense in 1941 of $45,310.47 and unexpended revenue that year of $12,388.83. The Society ended the year of 1942 with total assets, cash and securities, of $229,951.27 plus unexpended revenue of $10,463.42.

There was much discussion at this point concerning the proper form in which reports offered to the Council should be handled by the Council. Should such reports be received, accepted or adopted? The President requested Dr. Frank R. Ober, Suffolk, to engage in research to this end. This the latter did. He read from *Robert's Rules of Order* to the effect that, although these terms are often used indiscriminately, the term "adopt" is preferable and least likely to be misunderstood.

Dr. Lester M. Felton, Worcester, moved that the Treasurer's report be accepted. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Report of Executive Committee

This report (Appendix No. 5) was presented by the Secretary. The report spoke of two meetings which the committee held, one on October 21, 1942, and the other on December 30, 1942. The meeting held in October was of an emergency character and was called for the purpose of giving consideration to a vote adopted by the Massachusetts Board of Registration in Medicine, to wit:

> Voted to ask the Governor of Massachusetts to waive the law (Chapter 112, Section 2, T. E.) to the effect that we may temporarily permit members of the medical profession, who are graduates of approved schools, who are registered to practice in other states and who are recommended by the National Procurement and Assignment Service, to practice in Massachusetts during the emergency without payment of the registration fee, and without examination.

The purpose of this action on the part of the Board was to facilitate the work of the Procurement and Assignment Service in relocating physicians during the present emergency and it was undertaken as a result of a conference between the Board, Dr. Lahey, Dr. Fitz and certain officers of the Massachusetts Medical Society. The report continued to say that Governor Saltonstall was willing to use his wartime emergency powers in this direction provided the Massachusetts Medical Society approved and that the Executive Committee, in the name of the Massachusetts Medical Society, gave its unanimous approval.

The Secretary moved that the Council approve this act of the Executive Committee. This motion was seconded by a councilor and it was so ordered by a vote of the Council.

The report spoke of the subsequent fate of this matter. The Attorney General, when approached for the purpose of actually drawing up the act, advised against it, because he was not convinced of its need in Massachusetts at that time. He made it clear, however, that he was without prejudice against the time when this need might arise in this state. He also spoke of the possibility of legislative action along this line. The report added that the committee had given consideration to this latter course of action, since such action had been urged by the Executive Committee of the Federation of State Medical Boards and recommends adversely on this particular proposition, because a directive from the Governor, when and if such a need develops, is much the simpler approach.

The Secretary moved the adoption of the recommendation. This motion was seconded by a councilor and it was so ordered by a vote of the Council.

The Executive Committee, acting on the recommendations of the Committee on Membership,

reired eleven fellows, restored eight to membership and accepted the resignations of four.

The committee approved of the recommendations contained in the reports of the Committees on Membership, Finance, Public Relations and Arrangements.

The committee commended to the Council the report of the Committee on Medical Education anent the nursing situation.

The committee recommended that the question of establishing a junior membership in the Massachusetts Medical Society, raised in a letter from Dr. Reginald Fitz, be referred to the Committee on Membership.

The Secretary moved the adoption of this recommendation. This motion was seconded by a councilor.

Dr. I. R. Jankelson, Norfolk, asked for a definition of junior membership. The Secretary suggested that Dr. Fitz might more properly answer this question. In reply, Dr. Fitz said that the matter will come up later in a report that he would submit. Dr. Jankelson thought that no action should be taken on this matter until more was known about it. The recommendation was adopted by vote of the Council.

The committee recommended the creation of a war-participation committee of five to be appointed by the President to act in conjunction with a similar committee of the American Medical Association. The Secretary moved the adoption of the recommendation. This motion was seconded by a councilor. Dr. Ernest L. Hunt, Worcester, asked what the duties of such a committee would be. The Secretary suggested to the President that Dr. Roger I. Lee, Suffolk, president-elect of the Massachusetts Medical Society and chairman of the Board of Trustees of the American Medical Association be permitted to answer Dr. Hunt's question.

Dr. Lee said that a war participation committee would take the place of the old Committee on War Preparedness, the functions of which latter committee have largely been taken over by a governmental agency, the Procurement and Assignment Service, which is responsible to the government and not in any way to medical societies. Dr. Lee added that it seemed desirable to have committees appointed by medical societies and responsible to them which could act as a sort of clearing house and liaison between the medical societies and Procurement and Assignment Service in the work that this latter agency is called on to do.

Dr. Hunt asked how such a committee could do anything without an appropriation. Dr. Lee replied that such a committee might need a modest appropriation. There was much discussion on the matter, participated in by Dr. Robert N. Nye, Suffolk, Dr. Fitz and Dr. Carl Bearse, Norfolk.

The recommendation was adopted by vote of the Council.

The committee recommended that the request of Dr. Charles S. Butler, treasurer, for an indefinite leave of absence because of illness be granted, and that the Council express its very great thanks for his fine service to the Society and its regret that he had found such a step necessary. The Secretary moved the adoption of this recommendation. This motion was seconded by a councilor and it was so ordered by vote of the Council. The committee approved of the recommendation of the Committee on Finance that Dr. Butler's salary be paid to him up to and including December 31, 1942.

The Secretary acknowledged the receipt by the President of a letter dated January 28, 1943, in which Dr. Butler resigned as treasurer of the Massachusetts Medical Society. On a motion by the Secretary and a second by a councilor, this communication was laid on the table.

The committee acknowledged the receipt by the President of the following letter from Dr. William J. Brickley, Suffolk:

December 30, 1942

Dr. George Leonard Schadt, President
Massachusetts Medical Society
Boston, Massachusetts

Re: Gift to Massachusetts Medical Society

Dear Doctor:

Enclosed please find my check for $1000 as a gift to the Massachusetts Medical Society, to be used in carrying out its usual functions as an educational body.

I would suggest that — though I do not make it a binding condition of the gift — this fund be used to procure any necessary lunches for the official meetings of the Committee on Ethics and Discipline. I have in mind the many hours spent and the difficult problems dealt with, not hastily, at such meetings.

Please advise me whether the Society will accept this gift.

Sincerely,

WILLIAM J. BRICKLEY, M.D.

The committee offered three recommendations with regard to this gift: that it be accepted by the Council with thanks; that it be used to create a fund which shall be known as the Dr. William J. Brickley Fund; and that it be used for the purpose outlined in Dr. Brickley's letter until otherwise ordered by the Council.

The Secretary moved the adoption of these recommendations. This motion was seconded by a councilor and it was so ordered by vote of the Council.

The committee had reviewed a list of appointments made by the President and had given them its approval.

The Secretary moved the adoption of the report of the Executive Committee as a whole. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Reports of Committees

Committee on Arrangements—Dr. Gordon M. Morrison, Middlesex South, chairman

The report, which was offered by Dr. Roy J. Heffernan, Norfolk, reads as follows:

> I beg to submit herewith the report of the Committee on Arrangements. Owing to the present unsettled conditions surrounding us, the committee has three recommendations to make, all of which have been reviewed and approved by the Executive Committee: that the Council rescind its action of May, 1942, naming Springfield as the place of the annual meeting in 1943; that Boston be the place of the meeting in 1943; and that following the passage of the present emergency, the Council give serious consideration to Springfield as a suitable place for an annual meeting.

Dr. Heffernan moved the adoption of these recommendations. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Dr. Heffernan then made the following announcement:

> Owing to the fact that the committee could not secure the proper hotel accommodations in Boston for May 17, 18 and 19, the Committee on Arrangements has changed the dates of the annual meeting. These new dates are May 24, 25 and 26.

The report as a whole was adopted by vote of the Council following a motion by Dr. Heffernan and a second by a councilor.

At this point it was explained to Dr. William A. R. Chapin, Hampden, that Dr. Spaid had sought retirement.

Committee on Publications—Dr. Richard M. Smith, Suffolk, chairman

This report (Appendix No. 6) said that Dr. George W. Thorn, Hersey Professor of the Theory and Practice of Physic at Harvard University and physician-in-chief at the Peter Bent Brigham Hospital, would deliver the Shattuck Lecture at the annual meeting.

It quoted Dr. Nye's report to the committee:

> During 1942, the *New England Journal of Medicine* received 1984 new "outside" subscriptions, a total that is over 50 per cent greater than the total received in 1941. Of these subscriptions, 1085 were from regular subscribers and 899 from medical students. As would be expected, there were many cancellations, undoubtedly owing to enlistment in the armed forces; the net increases were 216 regular subscribers and 711 medical students, which total 927. As of December 31, 1942, journals were being sent to 5083 members of the Society (a decrease of 74 from the 1941 figure), 3462 regular subscribers and 1193 medical students, a total of 9738, which is greater by 853 than the total for 1941. This does not include 348 members of the New Hampshire Medical Society, who receive the *Journal* once a month.
>
> The editorial board took action on 238 manuscripts during 1942, a decrease of 90 compared with the figure for 1941. Of these papers, 169, or 71 per cent, were accepted.

There was a net loss of $17,550 in operating the *Journal* in 1942. This represents $3.43 per member of the Society and is approximately $2450 less than the amount appropriated by the Society. The net cost per member was $3.20 in 1941. A larger circulation, increased costs in binding and mailing, and fifty-three issues in 1942, a situation which arises every seven years, represent the reason for increased operating expenses in 1942.

It was stated that the operating expenses would probably be lower in 1943. This was predicated on a smaller total circulation and higher advertising rates, the latter being effective January 1, 1943. If it became a choice between cutting the pagination of the *Journal* or the acceptance of papers for publication below the *Journal's* present standards, the pagination would suffer the cut.

Dr. Smith moved the adoption of the report. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Committee on Membership—Dr. Harlan F. Newton, Suffolk, chairman

This report (Appendix No. 7) recommended adversely on the petition of Dr. Morris A. Cohen, 452 Beacon Street, Boston, for reinstatement to membership in the Massachusetts Medical Society.

Dr. Newton moved the adoption of this recommendation. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Dr. Walter Fenno Dearborn, 79 Fresh Pond Parkway, Cambridge, because of eminent work in the allied sciences, was recommended for associate fellowship in the Massachusetts Medical Society.

Dr. Newton moved the adoption of this recommendation. This motion was seconded by a councilor and it was so ordered by vote of the Council.

The committee offered the following recommendations:

> 1. That the following recommendation from the then Committee on Membership, passed by the Council February 5, 1941, be revoked: "Fellows of the Society who are called to full-time service in the United States Army, Navy or Public Health Service during the present emergency and whose livelihood is thereby impaired may, on written application to the Treasurer stating their situation, have their dues remitted for the year of service. A period of full-time service greater than six months shall give the privilege of a year's

remission of dues. The *New England Journal of Medicine* will be sent to such members only on payment of an annual fee of four dollars ($4.00). The president of the Society shall determine the end of the present emergency."

2. That the following recommendation be passed: "Fellows of the Massachusetts Medical Society who have enlisted or been called to full-time service in the United States armed forces or in the United States Public Health Service during this present war shall have no further dues collected for the duration, their names continued on the membership roll of the Society as active members in good standing, and to only such members as request it will the *New England Journal of Medicine* be sent and then only on payment of an annual subscription fee of $4.00 per year. Any members who have joined or who subsequently join the United States armed forces or the United States Public Health Service should advise personally or by some other means the Treasurer of the Society to facilitate omission of dues. 'For the duration' is interpreted as meaning honorable discharge from the United States armed forces or United States Public Health Service."

3. That a flyer of this recommendation be attached to every bill or communication relating to indebtedness sent from the Treasurer's office of the Massachusetts Medical Society to its members.

Dr. Newton moved the adoption of recommendation No. 1. This motion was seconded by a councilor.

Dr. James P. O'Hare, Suffolk, asked if this recommendation included withdrawal from the Council or from committees. He added that some men have the idea that they should drop their positions as councilors and others that they should not, and that this same holds true with regard to membership on some of the committees of the Suffolk District Medical Society. Dr. Newton replied that he thought it would apply to any councilor in any capacity. In reply to further questioning by Dr. O'Hare, Dr. Newton said that it was his view that the councilors referred to would lose their positions automatically. Dr. Schadt expressed a like view. Dr. O'Hare added that at least one such councilor had asked that he be retained in the Council.

Dr. Chapin asked what provision is made for the men who will continue in the service after the present emergency is over. He added that they might be carried for the rest of their lives, absolved of paying dues. Dr. Newton replied that he thought that was a matter which could be taken up at the end of the year.

Dr. John Homans, Suffolk, asked if the adoption of this recommendation will cause the Treasurer to refuse tender of dues on the part of those in the armed forces. Dr. Schadt at this point said that it was evident that much more thought and study should be given to this matter and suggested that it might be wise to refer the whole matter to the Executive Committee.

Dr. G. Colket Caner, Suffolk, said that he had worded the previous rules, after conversations with Dr. Butler. He said that it was their joint viewpoint that members who had entered the armed forces and who wished to continue to pay their dues should be permitted to do so. He said he approved of the leaflets which it was suggested should be added to the bills sent out by the Treasurer. He thought, however, that the old way of having the individual fellow decide for himself whether he should or should not request that his dues be remitted had many advantages. Dr. Newton replied that it was not the intent of the Committee on Membership to say to these fellows that they cannot pay their dues if they so desire.

Dr. Nye asked if the recommendation read that the Treasurer "shall not accept." Dr. Newton answered, "No." Dr. Nye asked for a reading of the first of recommendation No. 2. Dr. Newton read as follows:

> Fellows of the Massachusetts Medical Society who have enlisted or been called to full-time service in the United States armed forces or in the United States Public Health Service during this present war shall have no further dues collected for the duration.

Dr. Nye asked if that did not mean that the Treasurer shall not accept dues even though they are sent in. Dr. Newton replied that it might be interpreted that way.

Dr. Walter G. Phippen, Essex South, asked if the former method was working any hardship on anybody. Dr. Newton replied in substance that this was partly so.

Dr. Donald Munro, Suffolk, suggested that the Council rescind the action of the Council as of February 5, 1941 — recommendation No. 1 — and refer the other recommendations to the Executive Committee. Dr. Nye pointed out that if this course were followed, the Society would have no means of remitting dues until such time as the Executive Committee had had time to act.

Dr. Caner thought that the whole matter might be covered quite well if a flyer were attached to each bill sent out by the Treasurer, calling each fellow's attention to the fact that, if they had entered the armed forces, they might have their dues remitted if they so desired and that these same men might continue to receive the *Journal* by the payment of $4.00.

Dr. Elmer S. Bagnall, Essex North, thought this matter should be referred to the Executive Committee as a means of saving the Council's time.

Dr. Newton, with permission of the Council, withdrew his original motion as did the seconder. He then moved that the matter be recommended, for investigation and action, to the Executive Com-

mittee. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Committee on Finance—Dr. John Homans, Suffolk, chairman

The report was published in the *New England Journal of Medicine*, issue of January 14, 1943.

Dr. Homans, in offering this report, spoke of the difficulty in these times of actually forecasting the income of the Society. His committee thought that $50.00 was a fair allowance for the expenses of a committee that was statewide in its composition.

He called attention to the expense of the Secretary's office which was more or less itemized. He said that the Secretary's office assumed many expenses of other committees and it was difficult to know where to assign these expenses. This was, however, he added, merely a matter of bookkeeping. He said that the same was true, to some extent, of the Treasurer's office. He pointed out that, now the bills for dues go directly to the members from this office, an item for the expense involved is included in the budget for that purpose. He said it might be necessary to employ a bookkeeper and that $1000 was set down to cover this contingency.

He spoke of the rather large item in the budget to cover the maintenance of the Society's headquarters. He said that this was a rather complicated item and had to do with dealings between the Society, the *Journal* and the Boston Medical Library. He said that the *Journal* hires the various bookkeepers, clerks and so forth, and that the Society pays the *Journal* for their services to the extent that it uses them. Rent is paid not directly to the Boston Medical Library but through the *Journal*. Dr. Homans said that his committee has suggested to Dr. Robey that he and the Treasurer get together and produce something that all can understand. He spoke of the $500 which was put down as a probable expense of holding the annual meeting and that it now was quite likely that this money would not be needed. He spoke of the reduction by $5000 in the amount set down against the needs of the *Journal*.

Dr. Carl Bearse called attention to the by-law which requires that any expenditure of $100 or more shall be broken down when so requested by a fellow. With this as a preamble, he requested that two large items, one for $42,000, representing the publication cost of the *Journal*, and the other $22,000 representing office and other salaries be broken down.

Dr. Homans broke down the second item as follows:

Editor	$7,000
Associate editor	360
Associate editor	360
Assistant editor	3,000
Editor's assistant	1,380
Office secretaries	
	1,872
	1,664
	1,300
	1,040
	1,144
	936
	1,040
Total	$21,096

With regard to the first item he read the following figures:

Printing	$17,000
Stock	10,000
Binding and mailing	12,000
Engraving	3,000
Total	$42,000

Dr. J. Harper Blaisdell, Middlesex East, made the following motion: First, under paragraph "Expenses of Officers and Delegates," that the item "Society Headquarters (general expenses) $4500" be stricken out and, second, that under the paragraph "Standing Committees," that the sum of $4500 be substituted for the zero after "Society Headquarters." Dr. Homans said he had no objection to this change. Dr. Fitz seconded the motion and it was so ordered by vote of the Council.

Dr. Channing Frothingham, Suffolk, moved that the report of the Committee on Finance be accepted. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Dr. Homans moved the adoption of the budget subject to the change indicated by Dr. Blaisdell's motion. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Committee on Ethics and Discipline—Dr. Ralph R. Stratton, Middlesex East, chairman

Dr. Stratton reported as follows:

> Mr. President, the Committee on Ethics and Discipline has no stated report to make today. Either owing to the improved ethical morale of the members or to the fact that we have lost some of our troublesome problems, we have had very few complaints this last year.

On a motion by Dr. Stratton and a second by a councilor, this report was accepted by vote of the Council.

Committee on Medical Education—Dr. Robert T. Monroe, Norfolk, chairman

The complete report of this committee appeared in the *New England Journal of Medicine*, issue of January 14, 1943.

Dr. Monroe spoke as follows:

Our studies on the nursing situation created by the war have been printed in the January 14, 1943, issue of the *New England Journal of Medicine*. Our conclusions from these studies are that there is a shortage of nurses in this state and in the country, and that it is real, present and serious. This shortage of nurses does not appear to have come about as a result of shortsightedness on the part of responsible individuals. On the contrary, we have been impressed with the efforts of federal authorities and of hospital, civilian-defense and nursing executives to avert the shortage early and late. As we see it, the chief difficulty has been to get the workers—nurses for war work, pupils for graduate-nurse and attendant-nurse schools and women for ward helpers and Red Cross volunteer nurse's aides.

We believe that the needs of the armed forces can and will be met. The civilian-defense situation is fairly well in hand, for it is well organized and has a growing reserve of paid and volunteer workers; but there is no evidence that the reserve is large enough to meet an epidemic situation in the next few months. We are in doubt concerning the ability of hospitals to continue adequate nursing service for their patients for the duration of the war in times, such as the present, which are not obviously emergencies and therefore do not provoke the maximum efforts of all concerned. Hospitals are experimenting with various solutions and are getting the loyal co-operation of nurses and volunteers, but their position is far from secure.

Federal authorities have these matters under consideration and are in the process of deciding upon one or more solutions. We have heard of the plans and must confess that none seem ideal. However, one supplementary step might be taken at once, and that is to establish training schools in the large Army and Navy Hospitals. Teaching staffs could be assembled from the Army and Navy Nurses Corps and from civilian schools. Such schools could train easily several thousand pupils who in six months' time could become useful to those hospitals. Meanwhile it would appear to be the duty of every physician to foster in every possible way the growth and effectiveness of the graduate-nurse and attendant-nurse schools and the Red Cross volunteer-aide classes.

On a motion by Dr. Monroe and a second by a councilor the report was adopted by vote of the Council.

Committee on Public Health—Dr. Francis P. Denny, Norfolk, chairman

No report.

Committee on Medical Defense—Dr. Arthur W. Allen, Suffolk, chairman

No report.

Committee on Society Headquarters—Dr. William H. Robey, Suffolk, chairman

No report (see report of Committee to Aid the Boston Medical Library).

Committee on Industrial Health—Dr. Dwight O'Hara, Middlesex South, chairman

Dr. O'Hara spoke as follows:

On November 7 the Committee on Industrial Health held a morning, afternoon and evening program at the Harvard Club of Boston. Three hundred and eighteen persons, exclusive of speakers and committee members, registered, and when questioned responded to the effect that the meeting was not only worth while but worth repeating with another program. The committee is therefore arranging for a similar meeting, also to be held on a Saturday and at the Harvard Club, probably in April. The details of this meeting will be announced in the *New England Journal of Medicine*.

The committee has now had on file for some months the names and pertinent data concerning three hundred or more Massachusetts physicians who have signified their interest in and their availability for industrial medical practice. These data are also compiled on a punch-card system at the office of the Division of Occupational Hygiene of the State Department of Labor and Industries, and its availability was brought to the attention of the Associated Industries of Massachusetts at their annual meeting last fall. The fact that there have been only three or four inquiries from industrial plants seeking medical service, after what would seem to have been adequate publicity concerning this list, indicates that in Massachusetts at least the supply of industrial medical service is ample, and still is in excess of its demand.

Dr. O'Hara moved the adoption of the report. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Massachusetts Committee on Procurement and Assignment—Dr. Reginald Fitz, chairman

The report (Appendix No. 8), by courtesy of the committee, was presented by Dr. Fitz, who moved its adoption. This motion was seconded by a councilor and it was so ordered by vote of the Council.

The Council adjourned for luncheon at 1:00 p.m. and reassembled at 1:50 p.m.

Committee on Public Relations—Dr. Elmer S. Bagnall, Essex North, secretary

Dr. Bagnall reported as follows:

The committee held one meeting, on December 16, 1942, with members of the subcommittee on workmen's compensation hospitalized cases (Drs. Ellison, Gordon, Morrison and Scannell). The report of this subcommittee was considered and adopted and is recommended to you for adoption.

After conference with the Industrial Accident Board's advisory committee there was agreement with the Ellison subcommittee on the following:

(1) Freedom of choice in hospitalized cases should hereafter be defined as the selection by the injured (or his agent) of a physician from two lists, one containing the names of all physicians eligible to practice in the hospital concerned and the other the names of physicians submitted to the hospital by the insurer.

(2) The Ellison subcommittee was authorized to offer its support to the committee now revising the Industrial Accident Board's fee schedule.

The President invited the committee's attention to recent editorials and letters in the *Boston Herald* relating to our alleged attitude toward refugee physicians. The committee believes that organized medicine is misrepresented often enough to make it desirable that a subcommittee, not limited to the personnel of the Committee on Public Relations, be appointed to look into this matter and report to the Committee on Public Relations. If the committee finds ground for action you will then be asked whether you want a professional publicity agent to interpret fairly the attitude of the Society as the occasion arises.

Dr. Bagnall moved that the report be accepted and the recommendations adopted. The motion was seconded by a councilor and it was so ordered by vote of the Council.

Committee on Tax-Supported Medical Care — Dr. Bagnall, chairman

This report was as follows:

The committee, through the chairman, is working in liaison with the Department of Public Welfare at the State House. There have been no matters of policy change necessitating a meeting of the entire committee. It seems desirable to continue the life of this committee despite the lull in current activities, so this is submitted as a report of progress.

Dr. Bagnall moved that the report be adopted as a report of progress. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Committee on Postpayment Medical Care (Bank Plan) — Dr. Bagnall, chairman

This report was as follows:

We are still awaiting the call of the committee from the Massachusetts Bankers Association who now hold the initiative.

Dr. Bagnall moved the adoption of this report. The motion was seconded and it was so ordered by vote of the Council.

Committee to Meet With the Medical Advisory Committee of the Industrial Accident Board — Dr. Daniel J. Ellison, Middlesex North, chairman

No response.

Committee on Prepayment Medical-Care Costs Insurance — Dr. James C. McCann, chairman

This report (Appendix No. 10) was presented by Dr. McCann, who moved its adoption. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Committee on Legislation — Dr. Brainard F. Conley, Middlesex South, chairman

Dr. Conley reported as follows:

This committee is now composed of eighteen members, one from each district of the Society, elected by ballot at the annual meeting of each district. The personnel of the committee at its start was as follows: Berkshire, P. J. Sullivan; Franklin, H. G. Stetson; Hampshire, J. D. Collins; Hampden, W. A. R. Chapin; Worcester North, H. D. Bone; Worcester, L. M. Felton; Essex North, E. H. Ganley; Essex South, C. A. Worthen; Middlesex North, W. H. Sherman; Middlesex East, K. L. Maclachlan; Middlesex South, B. F. Conley; Suffolk, W. B. Breed; Norfolk, D. L. Lionberger; Norfolk South, J. E. Knowlton; Plymouth, C. D. McCann; Bristol North, J. L. Murphy; Bristol South, E. H. Cody; Barnstable, not elected. There have been two resignations. D. L. Lionberger, of Norfolk, was the first to enlist in the service of his country and he has been succeeded by J. V. Fisher of their district. Shortly afterward, K. L. Maclachlan, of Middlesex East, enlisted and he has been succeeded by J. M. Wilcox. Both these men have done noble service for this society and they are now doing noble work for their country. This committee is proud of both of them. On October 21, 1942, on a call from the President, this committee met and organized. Brainard F. Conley, of Middlesex South, was elected chairman and Lester M. Felton, of Worcester, was elected secretary. It was voted that a committee of five members be appointed by the chairman, to consist of the chairman and four others, to act as a working committee, with authority to act for the full committee and that they be empowered to use their discretion in an emergency. The chairman has appointed the following four members: L. M. Felton, W. B. Breed, J. V. Fisher and C. D. McCann. This committee of five has already started going over the legislative petitions.

Because of so many members of the Society already in the armed forces of our country and more to go, we realize that the income of the Society will for this year be considerably lessened. For this reason we voted to discontinue the "Legislative Bulletin" for the duration.

The committee wishes to extend its thanks to the editor of the *New England Journal of Medicine* for his immediate willingness to publish, as often as necessary, such legislative matters as will be of interest to the members of the Society. We believe that this will have certain advantages over the bulletin, in that you will have knowledge of pending legislation much more promptly than heretofore. We therefore suggest that you watch each issue of the *Journal* from now on until the end of the present legislative year for your legislative information. After all, the *Journal* is the official organ of the Society.

Up to January 27, there have been twenty-eight petitions in the House of Representatives and four in the Senate which, in the opinion of the Legislative Reporting Service, are of concern to medicine. All these seem to be of more or less interest and are in the process of study as to their importance. So far there does not seem to be any incidence of new legislation. Some of the year-after-year bills are missing, at least up to now. For example, there is no "annual registration" petition, and the osteopaths and chiropractors are apparently occupied with things other than legislation.

We have published in the current issue of the *Journal* the whole of a petition which calls for the repeal of the provisions of the law requiring premarital serologic tests. This bill is marked for a hearing on March 11. We are inclined to believe we should lend our aid in retaining the blood-test part of the present law.

There is another blood-test bill which has come to our attention. It is numbered House 869 and reads as follows:

> Every qualified physician shall, not less often than once in every period of six months, submit to and take a blood test for the social diseases syphilis and gonorrhea, under rules and regulations promulgated therefor by the board of registration in medicine, and shall at all times have permanently displayed in each of his offices or places of business a certificate of the board stating the date and the results of each last blood test.

We hope to have completed the study of all bills within the next two weeks and as soon as possible our recommendations as to action on each will be published, as well as the dates of hearings.

We have no recommendations to make at the present time.

Dr. Conley moved the adoption of this report. The motion was seconded by a councilor and it was so ordered by vote of the Council.

Dr. Conley called attention to the *Journal of the American Medical Association*, issue of January 23, 1943, page 267, and advised all to read this material which represents the opinion of the court in affirming the guilt of the American Medical Association.

Committee on Cancer — Dr. Shields Warren, Suffolk, chairman

No report.

Committee on Postgraduate Instruction — Dr. Reginald Fitz, Suffolk, chairman

No report.

Military Postgraduate Committee — Dr. W. Richard Ohler, Jamaica Plain, chairman

No report.

Committee on Physical Therapy — Dr. Franklin P. Lowry, Middlesex South, chairman

No report.

Committee on Expert Testimony — Dr. Frank R. Ober, Suffolk, chairman

No report.

Committee on Automobile Insurance Claims — Dr. Henry C. Marble, Newton Centre, chairman

No report.

Committee on Convalescent Care — Dr. T. Duckett Jones, Roxbury, chairman

No response.

Committee to Study the Practice of Medicine by Unregistered Persons — Dr. Richard Dutton, Middlesex East, chairman

No report.

Committee to Meet with Massachusetts Hospital Association — Dr. Walter G. Phippen, Essex South, chairman

No report.

Committee to Examine WPA Records — Dr. Guy L. Richardson, Essex North, chairman

No report.

Committee on Maternal Welfare — Dr. Judson A. Smith, Newton Centre, chairman

No report.

Committee on Rehabilitation — Dr. William E. Browne, Suffolk, chairman

Dr. Browne reported as follows:

> There has been no occasion for this committee to meet since the last meeting of the Council and no meeting has been held. A few days ago a communication was received from the Subdivision on Health of the Massachusetts Committee on Public Safety. That communication states that a program is to be worked out whereby the Industrial Rehabilitation Division of the State Department of Education, through local rehabilitation agents now appointed, will determine which of those classified IV-*F* in the draft may be returned to various war industries.
>
> The plan anticipates that lay persons who have had some training as a nurse or social worker will review the confidential records indicating the cause for rejection of certain draftees. No action by the Council seems necessary on this matter at present. An expression of opinion would be appreciated from the Council concerning the desirability, if possible, of registered physicians in the Commonwealth reviewing these confidential matters with the hope of being of assistance to rehabilitation agents and others interested in returning a considerable number of men to various war industries. And so I have to report that that has just come to our attention.

Dr. Browne moved the adoption of the report; this was seconded by a councilor and it was so ordered by a vote of the Council. He then moved that the Council recommend that these persons, rejected by selective service, should have their cases reviewed by a physician rather than by a lay person before they go into industry. This recommendation was seconded by a councilor. Dr. Homans asked if this called simply for an expression of opinion by the Council. Dr. Browne replied in the affirmative. It was so ordered by vote of the Council.

Committee to Aid the Boston Medical Library—Dr. William H. Robey, Suffolk, chairman

In the absence of Dr. Robey, the report was read by the Secretary, as follows:

It is the unanimous opinion of the Committee on Society Headquarters of the Massachusetts Medical Society that it is inadvisable to consider at the present time the purchase of a headquarters house for the Massachusetts Medical Society. Fellows in and out of Boston not members of the Committee have been asked about the desirability of having a house for the Society and not one has been found who has favored such an idea.

During the last six or seven years the Massachusetts Medical Society's use of the facilities offered by the Boston Medical Library has greatly increased, thereby causing added expense to the Boston Medical Library. The Library is used by members of the Society and almost constantly by the editorial staff of the *New England Journal of Medicine*, since all the communications to the *Journal* and especially the references to medical literature are confirmed in the Library.

The Boston Medical Library is the fourth largest medical library in the United States and therefore the thought that it must come to an end because of lack of funds cannot be tolerated. Various ways have been considered for increasing its membership but none have been successful largely because of the lack of interest of practitioners who live at a considerable distance from Boston. Even the membership of fellows living in Greater Boston is much smaller than it should be. The Committee on Finance proposes using the income of the Headquarters Building Fund for the Library. That income has varied in recent years from $1800 to $2200 per year. The money would probably be used to make the Library staff more efficient. There is a great need for training in library methods an assistant director who, if he proved to be of the right caliber, might in time be advanced to the position of director. An energetic young man in such a position would undoubtedly find the means of making the Library of far greater service to the members of the Massachusetts Medical Society than is the case at the present time. Those librarians who have been consulted in this matter are agreed that the value of many medical libraries has been greatly enhanced through the efforts of a director trained in modern library methods.

The Massachusetts Medical Society, the *New England Journal of Medicine* and the Boston Medical Library are inseparable. Medical schools and hospitals in many instances have their own working libraries, but the Boston Medical Library is and will continue to be the greatest reference library in this section of the country. We have the expectation of acquiring before long some additional space in the Library building which can be used for meetings of committees and other groups.

The Secretary pointed out that this report contained a recommendation that the income from the Headquarters Building Fund, amounting to between $1800 and $2200 per year, be turned over to the Boston Medical Library as a means of keeping this valuable institution going. The Secretary moved the adoption of this recommendation and said that Dr. David Cheever, who likewise was unable to be present, wanted to be recorded in its favor. The motion was not seconded.

Dr. Charles E. Mongan, Middlesex South, objected to the adoption of this recommendation on the grounds that it calls for action that more properly should come under new business. He added that it came to us all as news that this situation had arisen. He moved that the whole matter be referred to the Executive Committee, that the attention and study which it deserves be taken by it and that its report be given at least twenty days before the annual meeting if it is possible to do so. This motion was not seconded.

Dr. Homans said he rather agreed with Dr. Mongan's idea. He added that from the point of view of the Committee on Finance, this matter of using some of the income of so-called funds for a permanent home has rather appealed to him. The income from funds of this kind that have been accumulating for a great while had better be used if some good use of the income can be found. If the dollar is devaluated 65 per cent the fund would not be what it was. So far as the Library is concerned, Dr. Homans added that he was one of its several directors and that the idea of this institution has always been to serve the Massachusetts Medical Society. Dr. Homans quoted Mr. Metcalf as saying that some attempt should be made to sell the Library to the medical public. Dr. Homans added that this has been successfully done in Chicago. The Boston Medical Library needs an active young man to put this over. The Library itself, without being in actual financial straits, is utterly incapable of doing this alone.

Dr. Fitz moved the acceptance of the report. This motion was seconded by Dr. Albert A. Hornor, Suffolk, and it was so ordered by vote of the Council.

Dr. Conley asked the source of this $1800 to $2200 that it is proposed to turn over to the Boston Medical Library. Dr. Homans replied that it comes from the income of the Building Fund.

Dr. Hunt thought it would be enlightening to know how serious were the financial straits of the Library. Dr. Homans said that the Library was not in financial straits. It could continue to operate. It needed rehabilitation, however, and it did not have the funds to do it.

At this point Dr. Allen G. Rice, Hampden, asked Dr. Mongan to repeat his motion. Dr. Mongan again offered his original motion. It was seconded by Dr. Rice and it was so ordered by vote of the Council.

Committee on Ways and Means to Conserve Physicians' Energies—Dr. Elmer S. Bagnall, Essex North, chairman

This report (Appendix No. 10) said that perhaps one third of the able-bodied active practitioners of medicine are now withdrawn from their communities by the war effort. It added, however, that this will not seriously endanger the distribution of essential medical care except in certain areas where mushroomed growth of population has taken place.

It referred to Worcester as one center that had undertaken to utilize the services of hospitals in attempting to locate physicians in matters of emergency.

In Haverhill, physicians have volunteered to respond to night calls when the family physician is not available. For this service physicians are listed for each night and the telephone company is cooperating. The report spoke of the co-operation of a prominent pharmaceutical house in this work. It emphasized the fact that the method of handling this problem will vary with the community and that the medical profession of each community should take this responsibility to itself.

Hospitals should have the co-operation of their staff doctors to the end that hospital beds shall be used only by those who actually need them.

The report emphasized that these problems are very much in the minds of organized medicine and that, so far as Massachusetts is concerned, the Committee on Public Relations, because of the nature of its composition, would seem to be the clearing house for the initiation of remedies.

Dr. Fitz commented on the importance of this report. He asked Dr. Bagnall if he had any ideas concerning how the views that he put forward could be brought before the public and before the profession most forcibly.

Dr. Bagnall replied that he thought that the matter should have a little more study and that the Committee on Public Relations might be able to devise the means of spreading the doctrine. Dr. Bagnall continued as follows:

> All of you probably saw the editorial in the *Herald* recently, I think about a week ago. It was very good. And there have been editorials in a lot of papers, and magazine articles. *Time* had an article; the *New York Times* had a special article in the Sunday magazine section. The idea is being broadcast, and I think in Massachusetts the whole state needs to consider it rather more than it has as yet. I think we in organized medicine rather tend to let these things go by default. If we are going to be considered by the Government we must do what we can to organize our house and fulfill our obligations in the distribution of medical care; so that they are more likely to consult us than if we default and they have to take over. I don't know that I have any specific recommendations beyond these.

Dr. Bagnall moved that this report be accepted as a report of progress and that the committee cooperate with any other agency that may be made available to carry out these suggestions. This motion was seconded by Dr. Mongan and it was so ordered by vote of the Council.

Appointments

Dr. Schadt read a list of nominations:

Delegates and alternates to the House of Delegates, American Medical Association from June 1, 1943 to June 1, 1945:

Delegates	*Alternates*
Allen G. Rice, Springfield	Patrick J. Sullivan, Dalton
Richard H. Miller, Boston	John Fallon, Worcester

Delegates to the annual meetings of the medical societies of the other New England States (except New Hampshire):

Maine: Warren H. Sherman, Lowell, and Frank W. Snow, Newburyport

Vermont: George D. Henderson, Holyoke, and George L. Steele, Springfield

Rhode Island: George A. Buckley, Brockton, and Howard P. Sawyer, Fall River

Connecticut: Ira M. Dixson, Stockbridge, and Clarence E. Burt, New Bedford

Delegate to the Annual Congress of the American Medical Association on Medical Education and Licensure at the Palmer House, Chicago, February 15 and 16, 1943:

Reginald Fitz, Boston

Ad interim appointments to fill vacancies:

Council

Dr. Byron H. Porter, Berkshire, replacing Dr. I. S. F. Dodd, who has become a member *ex officio*.

Dr. Frederick S. Hopkins, Hampden, replacing Dr. Oliver J. Menard, resigned.

Dr. Benjamin S. Wood, Middlesex South, replacing Dr. Raymond A. McCarty, resigned.

Dr. David L. Belding, Norfolk South, replacing Dr. Robert L. Cook, who has become a member *ex officio*.

Dr. Frederick W. O'Brien, Suffolk, replacing Dr. George C. Shattuck, resigned.

Dr. Arthur W. Marsh, Worcester, replacing Dr. George C. Tully, resigned.

Dr. Alfred P. Lachance, Worcester North, replacing Dr. Jesse C. Hales, resigned.

Boards of Censors

Dr. George A. Buckley, supervising censor, Plymouth, replacing Dr. William T. Hanson, resigned.

Dr. John A. Pettey, member of Board of Censors, Plymouth.

Committee on Arrangements

Dr. George G. Bailey, replacing Dr. Robert H. Barker, resigned.

Committee on Legislation

Dr. Charles D. McCann, Plymouth, replacing Dr. William T. Hanson, resigned.

COMMITTEE ON WAYS AND MEANS TO CONSERVE PHYSICIANS' ENERGIES

Dr. Elmer S. Bagnall, *chairman*
Dr. Charles F. Wilinsky
Dr. John J. Dumphy

Dr. Schadt asked if there were any nominations from the floor. Dr. J. Harper Blaisdell, Middlesex East, moved that they be confirmed. This motion was seconded by a councilor and it was so ordered by vote of the Council.

NEW BUSINESS

The President read the obituary of Dr. Charles Malone, a councilor from Norfolk District.

Dr. Charles Malone, councilor from the Norfolk District, died at his home in Jamaica Plain on October 10, 1942. He was in his sixty-eighth year.

Dr. Malone received his degree from Tufts College Medical School in 1902 and since that time had practiced in Jamaica Plain. He was a fellow of the American Medical Association.

Two sons and a daughter survive him.

At the request of the President, the Council stood in silence for one minute in tribute to the memory of Dr. Malone.

The Secretary presented a letter and enclosure (Appendix No. 11) which he had received from Dr. Henry M. Landesman, Norfolk.

Dr. Mongan moved that these matters be referred to the Committee on Legislation. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Dr. Hyman Morrison, Norfolk, urged greater support for the Boston Medical Library. He urged the councilors to get new members for the Library and suggested that hospital libraries might become participating members.

Dr. John Fallon, Worcester, made the following motion:

That the Executive Committee and the editors of the *New England Journal of Medicine* be instructed to investigate the feasibility of sending the *Journal* to each military station, having a medical library, at the expense of the Massachusetts Medical Society, that the Executive Committee be empowered to act in this matter and that the sum of $400 be appropriated to that committee for that purpose.

Dr. Richard M. Smith, Suffolk, asked how many copies that would mean. He expressed the view that it might run into a considerable number of *Journals* and that the cost might be great.

Dr. Conley expressed the view that the men at Guadalcanal and Solomon Islands are not going to have much time to read the *Journal*.

Dr. Nye thought 800 copies might be needed and observed that $400 would not go far under these circumstances.

Dr. Fallon remarked at this point that, in view of what had been said, it would be better if he withdrew the second part of his motion and left that part which empowered the Executive Committee only to look into the matter.

Dr. Homans suggested that the *Journal* ask members to donate journals. He expressed the viewpoint that if this was done many contributions would come in for this purpose.

Dr. Bearse suggested that a notice be printed in the *Journal*, directed to subscribers, asking them to return their journals, after they had read them, for transshipment to the Army libraries.

Dr. Nye expressed the view that probably as many as 75 journals are now going to Army hospitals.

Dr. Fallon's original motion, which was not seconded, was withdrawn by him. He offered the following motion:

That the Executive Committee and the editors of the *New England Journal of Medicine* be instructed to investigate the feasibility of sending the *Journal* to each military station, having a medical library, at the expense of the Massachusetts Medical Society.

This motion was seconded by Dr. Fitz and it was so ordered by vote of the Council.

Dr. Harold R. Kurth, Essex North, made the following statement to the Council:

I wish to draw your attention to a matter which presented itself to the local membership committee of the Essex North District Medical Society. This matter arose in the course of the examination of one of its applicants for membership in the Massachusetts Medical Society just previous to the last censors' meeting. Having presented the facts in this case, I should like to call on the members of the Council for a sense-of-the-meeting vote.

An applicant, who is a graduate of the University of Kansas City Medical School in 1932, licensed to practice medicine in Massachusetts in 1937, applied, on July 17, 1942, for admission to the Massachusetts Medical Society. His application was sponsored by a reputable member of the profession in his community, and forwarded to the district secretary, together with six letters of recommendation from colleagues of high professional standing in this district. The Essex North local membership committee met, examined and interrogated the applicant very closely and, as a result of that examination and close interrogation, was of the unanimous opinion that he should be recommended for fellowship in the Society. I might state here and now that the local membership committee of Essex North takes its work very seriously and investigates all applicants, particularly those of unapproved or foreign schools. Unless they meet its unqualified approval the committee does not hesitate to refuse their applications for membership in the Society. This has been amply demonstrated in the past by the number of applicants who have been refused fellowship in the Society.

The chairman of the central committee on membership was duly notified by the secretary that "it is the

unanimous opinion of this committee, after due investigation, and close interrogation, that the applicant be recommended for fellowship in the Society." The local membership committee was somewhat surprised when it received word that the central committee on membership did not approve the application, in spite of the fact that it had been unanimously endorsed by the local committee. The reasons given by the chairman of the central committee were that his "educational qualifications were rather dubious." The local committee maintains that it already fully realized that situation, but felt, nevertheless, that it was in a better position to pass judgment on the man's qualifications for membership than was a group of men who in all probability did not know him at all. Furthermore, the local committee felt that his "educational qualifications" would be no different in two years than they were at the present time!

The second reason given by the central committee was "that the local committee was not particularly enthusiastic" and that "his recommending letters were not particularly informative." The local committee, in answer to this criticism, states that it feels that it is not necessary for the local committee to eulogize its applicants, and that when the local committee unanimously approves an applicant for fellowship in the Society, it means exactly that, and nothing else. The recommending letters of the applicant were honest expressions of opinions of physicians of high standing in his district, and due emphasis should be placed on these letters of recommendation.

The third criticism as stated by the chairman of the central committee was that it was of the "greatest importance" that the district membership committee should show "that the district society wants that applicant as a member." To this criticism the local committee replies that the Massachusetts Medical Society is representative of the highest standard of medical practice and medical ethics, and is the organization with which all physicians aspire to become identified. Therefore the applicant seeks the Society, and not the Society the applicant!

The purpose in presenting this matter to you is that it was felt by the Essex North local committee that it had spent a great deal of time in investigating this man's qualifications; it had spent almost an hour in interviewing this man and, as a result, had unanimously approved his application. Yet in spite of all this work, and in spite of the fact that this man was endorsed by a group of men for whom the local membership committee has the highest regard, his application was rejected by the central committee for the reasons which have been discussed above. It is felt by the local committee that if the opinion of the local committees in general is to be upset by the central committee for such inadequate and unsubstantial reasons, that the function of the local committees will become purely superfluous in character. When Dr. John Monks, of the Suffolk District, introduced the change in the by-laws with reference to application for fellowship in the Massachusetts Medical Society, at the special meeting held on April 9, 1941, he stated, in speaking of the local committee, as follows:

> The Committee on Medical Education and Medical Diplomas has sensed for a long time how helpless it was in obtaining adequate information on which to determine the desirability of candidates for fellowship; this point has already been discussed more fully in the formal report. It is believed that a local board will be in every way better fitted to obtain this information than the central committee. The number of men on the board is small, they are already in positions of responsibility in their local society, and two of the three are already members of the board of censors, which eventually will examine those candidates finally approved. Further, it is very definitely felt that in the case of graduates of unrecognized schools the essential responsibility of whether or not they should be admitted to membership in the local society should lie with their own nearby colleagues, not with those farther afield.

He furthermore stated, "The central committee shall take the responsibility of seeing that on the one hand undue pressure has not been brought to bear on the local board to recommend for approval an undesirable applicant, nor, on the other hand, that unwarranted local prejudice bar from approval a desirable applicant." It does seem, then, that the responsibility for recommending or turning down applicants for fellowship should rest with the local committee, under the supervision of the central committee. I might state furthermore, that this was the opinion in the minds of Dr. J. H. Blaisdell's by-laws committee in reviewing the mechanism for application for fellowship in the Society. It is the feeling of the local membership committee of Essex North that the principles, as expressed by Dr. Monks's and Dr. Blaisdell's committees, have been disregarded in this case, and that should this policy be continued, the important work of local committees will be jeopardized and must eventually become purely superfluous.

We have brought this matter to the attention of the Council because we are firmly convinced that the present by-laws for application for membership to the Massachusetts Medical Society are adequate and desirable. An applicant is tried, and approved by his colleagues, who are in an excellent position to know the type of professional ethics which this applicant practices far better than a group of men who in all probability know nothing of the applicant at all! It is hoped that the principles expressed by Dr. Monks will continue to dominate the endorsement of all new applicants to the Society.

Dr. Kurth made the following motion:

> It is the sense of this meeting that the essential responsibility of whether or not graduates of unrecognized or foreign schools shall be admitted to the Society lies in the local membership committees, and that the central committee should concern itself essentially with the responsibility of seeing that no undue pressure has been brought to bear upon the local boards, either to endorse, or to bar, the approval of candidates.

Dr. Bagnall in seconding the motion said the issue was clear. Either the local committee should do the job it ought to do or else the local committee should be discarded.

Dr. Roy V. Baketel, Essex North, spoke of how carefully the applicant had been examined and

how thoroughly the question of his acceptance had been discussed. He said that no change in the by-law is desired. The by-law is entirely adequate. Its administration, however, requires some attention.

Dr. Norman A. Welch, Norfolk, called the attention of the Council to the fact that, while the present by-laws were in the making, he tried to provide a means of appeal to the Executive Committee in cases of this sort. He added that he does not think this situation will arise often but, when and if it does, there is no means of handling it.

Dr. Fitz asked for a reading of the by-laws as they relate to this matter.

Dr. Schadt read from the by-laws as follows:

> The Committee on Membership shall have custody of such documents so long as needed and then shall deliver them to the custody of the Secretary; they shall remain *confidential*.
>
> The Committee on Membership shall consider the application of each applicant approved for censors' examination by a board of membership. It shall determine finally whether or not such applicant may take that examination.
>
> The Committee on Membership shall not consider the application of any applicant disapproved by a board of membership except on the written request of a majority of that board of membership.

Dr. Mongan asked for a rereading of the motion. Dr. Kurth complied and added that he did not propose any change in the by-laws and that his motion was not in conflict with these laws. He simply wished to determine the meaning of this new mechanism that has been set up—in other words, whether the responsibility of determining if a man is eligible lies with the local committee or with the central committee.

In answer to Dr. Blaisdell, Dr. Kurth said that all he was trying to get by his motion was the sense of the meeting.

Dr. Fitz expressed the thought that there were not enough councilors present at this time for the Council to pass a sense-of-the-meeting vote. There was some discussion at this point about a quorum. This issue, however, was not formally raised.

Dr. Kurth withdrew his motion and Dr. Bagnall his second with the consent of the Council.

Dr. Mongan moved that further discussion on this matter be postponed to the next meeting and that this matter be made the first order of business. This motion was seconded by a councilor and it was so ordered by vote of the Council.

Dr. Mongan moved that the Executive Committee consider some method of attendance that would cause councilors to remain until the business of the Council is completed. Dr. Fitz seconded the motion.

In supporting his motion Dr. Mongan referred to the meetings of the House of Delegates of the American Medical Association. He pointed out that each delegate was required to sign an attendance slip at every session and that the record of attendance was published, so that it might become generally known who were and who were not attending to their duties. He added that this had a salutary effect.

The motion was adopted by vote of the Council.

The Council adjourned at 3:30 p.m.

MICHAEL A. TIGHE, *Secretary*

APPENDIX NO. 1

ATTENDANCE

BARNSTABLE
C. H. Keene
W. D. Kinney

BERKSHIRE
J. J. Boland
I. S. F. Dodd
Solomon Schwager

BRISTOL NORTH
R. M. Chambers

BRISTOL SOUTH
C. C. Tripp

ESSEX NORTH
E. S. Bagnall
L. R. Chaput
J. P. Creed
H. R. Kurth
P. J. Look
R. C. Norris
G. L. Richardson
F. W. Snow

ESSEX SOUTH
Bernard Appel
H. A. Boyle
C. L. Curtis
Loring Grimes
B. B. Mansfield
O. S. Pettingill
W. G. Phippen
E. D. Reynolds
H. D. Stebbins
C. F. Twomey
C. A. Worthen

FRANKLIN
H. G. Stetson

HAMPDEN
W. C. Barnes
W. A. R. Chapin
A. J. Douglas
E. C. Dubois
Adolph Franz, Jr.
G. L. Gabler
P. E. Gear
Frederic Hagler
G. D. Henderson
A. G. Rice
G. L. Schadt
G. L. Steele

MIDDLESEX EAST
J. H. Blaisdell
Richard Dutton
E. M. Halligan
R. W. Layton
R. R. Stratton

MIDDLESEX NORTH
D. J. Ellison
W. H. Sherman
M. A. Tighe

MIDDLESEX SOUTH
C. F. Atwood
E. W. Barron
W. B. Bartlett
Harris Bass
J. M. Baty
G. F. H. Bowers
Madelaine R. Brown
R. W. Buck
E. J. Butler
J. F. Casey
B. F. Conley
H. F. Day
C. L. Derick
H. Q. Gallupe
H. G. Giddings
H. W. Godfrey
Eliot Hubbard, Jr.
L. H. Jack
F. R. Jouett
A. A. Levi
A. N. Makechnie
Dudley Merrill
C. E. Mongan

J. P. Nelligan
S. J. G. Nowak
E. J. O'Brien, Jr.
Dwight O'Hara
L. G. Paul
E. H. Robbins
M. J. Schlesinger
E. F. Sewall
E. W. Small
H. W. Thayer
A. B. Toppan
J. E. Vance
B. M. Wein
B. S. Wood
Hovhannes Zovickian

NORFOLK

J. R. Barry
Carl Bearse
Arthur Berk
M. I. Berman
G. F. Blood
L. F. Curran
F. P. Denny
Albert Ehrenfried
H. M. Emmons
J. C. V. Fisher
Susannah Friedman
David Glunts
J. B. Hall
R. J. Heffernan
I. R. Jankelson
C. J. Kickham
E. L. Kickham
D. S. Luce
T. F. P. Lyons
R. T. Monroe
F. J. Moran
Hyman Morrison
M. W. O'Connell
H. C. Petterson
S. A. Robins
S. M. Saltz
D. D. Scannell
Kathleyne S. Snow
J. W. Spellman
J. P. Treanor, Jr.
N. A. Welch

NORFOLK SOUTH

D. L. Belding
D. B. Reardon
H. A. Robinson

PLYMOUTH

P. H. Leavitt
G. A. Moore

SUFFOLK

H. L. Albright
A. W. Allen
W. B. Breed
W. J. Brickley
W. E. Browne
G. C. Caner
E. M. Chapman
David Cheever
Pasquale Costanza
G. B. Fenwick
Reginald Fitz
Maurice Fremont-Smith
Channing Frothingham
Joseph Garland
John Homans
A. A. Hornor
R. I. Lee
W. J. Mixter
Donald Munro
H. L. Musgrave
H. F. Newton
R. N. Nye
F. R. Ober
F. W. O'Brien
J. P. O'Hare
Helen S. Pittman
W. H. Robey
R. M. Smith
E. F. Timmins
S. N. Vose
Shields Warren
C. F. Wilinsky

WORCESTER

J. I. Ashkins
J. C. Austin
Gordon Berry
W. P. Bowers
G. A. Dix
J. M. Fallon
L. M. Felton
E. L. Hunt
W. F. Lynch
A. W. Marsh
J. C. McCann
A. E. O'Connell
R. S. Perkins
C. A. Sparrow
R. J. Ward
R. P. Watkins

WORCESTER NORTH

E. A. Adams
H. C. Arey
H. D. Bone
G. P. Keaveny
A. P. Lachance
B. P. Sweeney

APPENDIX NO. 2

REPORT OF THE AUDITING COMMITTEE FOR YEAR ENDED DECEMBER 31, 1941

The report of the examination of the books and accounts of the Massachusetts Medical Society for the twelve months ended December 31, 1941, made by Messrs. Hartshorn and Walter, of Boston, has been submitted to the attention of the Auditing Committee.

As the Auditing Committee, we have carefully examined the report of these certified public accountants, and approve the figures submitted by them.

LEROY A. SCHALL, *Chairman*
JOHN ROCK

• • •

January 30, 1942.

The Auditing Committee:
Dr. LeRoy A. Schall
Dr. John Rock

The Massachusetts Medical Society
8 The Fenway
Boston, Massachusetts

Gentlemen:

At the request of your treasurer, Dr. Charles S. Butler, we have examined the books and accounts of the Massachusetts Medical Society for the twelve months ended December 31, 1941, and submit herewith:

SCHEDULE A: Statement showing the balance sheet of the Massachusetts Medical Society, December 31, 1941.

SCHEDULE B: Statement showing the revenue and expenses of the Massachusetts Medical Society for the twelve months ended December 31, 1941.

The cash balance on December 31, 1941, was verified by direct correspondence and reconciliation. The cash receipts as recorded have been deposited in the bank and disbursements are supported by vouchers or canceled checks.

The securities and savings-bank books were examined or accounted for.

The accompanying balance sheet and related statement of revenue and expenses fairly present the position of the Massachusetts Medical Society on December 31, 1941, and the results of operations for the year ended on that date.

Respectfully submitted,
HARTSHORN AND WALTER.

50 Congress Street
Boston

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SCHEDULE A

STATEMENT SHOWING THE BALANCE SHEET OF THE MASSACHUSETTS MEDICAL SOCIETY, DECEMBER 31, 1941

ASSETS

Fund Securities and Cash		
Endowment Funds	$22,166.87	
Building Fund	62,074.95	
General Fund	132,595.40	
Total		$216,837.22

LIABILITIES AND FUND ACCOUNTS

Fund Accounts		
Endowment Funds:		
Shattuck Fund:		
G. C. Shattuck, 1854–1866	$9,166.87	
Phillips Fund:		
Jonathan Phillips, 1860	10,000.00	
Cotting Fund:		
B. E. Cotting, $1,000 — 1876-1881-1887	3,000.00	
		22,166.87
Building Fund		62,074.95
General Fund		132,595.40
Total		$216,837.22

SCHEDULE A EXHIBIT 1

ENDOWMENT FUNDS, DECEMBER 31, 1941

	Securities and Cash	Income
Shattuck Fund		
Annuity Policy — Massachusetts Hospital Life Insurance Co. Certificate No. 438	$9,166.87	$183.34
Phillips Fund		
$10,000 Commonwealth of Massachusetts 3½s Jan. 1, 1944 (Reg.)	10,000.00	350.00
Cotting Fund		
Deposit — Institution for Savings in Roxbury, No. 45252	1,000.00	20.00
Deposit — Provident Institution for Savings, Boston, No. 1828	1,000.00	20.00
Deposit — Suffolk Savings Bank, No. 68364	1,000.00	15.00
Totals	$22,166.87	$588.34

SCHEDULE A EXHIBIT 2

BUILDING FUND, DECEMBER 31, 1941

	Securities and Cash	Income	Premium Charged Off
Cash — New England Trust Co., Boston	$2,678.19		
Deposit — Framingham National Bank Savings Dept., Book No. 8592	379.60	$4.69	
Deposit — Franklin Savings Bank, Book No. 172838	1,884.04	37.11	
$1,000 Bethlehem Steel Corp. 3½s Cons. Mtg. Series H, Feb. 1, 1965	1,000.00	32.50	
1,000 Blackstone Valley Gas & Electric Series C 4s, Nov. 1, 1965	1,025.00	40.00	
1,000 Boston & Albany R.R. 1st Mtg. Series A 4½s, Apr. 1, 1943, Guaranteed	967.50	45.00	
1,000 Canada, Dominion of, 3s, Nov. 15, 1968	972.50	30.00	
— Central Illinois Public Service Co. 1st Mtg. Series A 3¾s, Dec. 1, 1968		75.00	
1,000 Central Pacific Ry. Co. 1st Ref. Mtg. 4s, Aug., 1949	717.80	40.00	
1,000 Chicago, Burlington & Quincy R.R. Co. 4s, Mar. 1, 1958	977.78	40.00	
5,000 C/D Chicago, R. I. & Pacific Ry. 1st Ref. 4s, Apr. 1, 1934 (In Default), Written Down	400.00		
5,000 Conveyancers Title Insurance & Mortgage Co. Parti Mtg. 4½s, Oct. 31, 1939 (In Default), Written Down	1,162.09	60.55	
1,000 City of Quincy, Mass., 3½s, May 1, 1943	1,016.00	35.00	
1,000 Connecticut River Power Co. 3¾s Series A, Feb. 15, 1961	1,045.00	37.50	
1,000 Elgin, Joliet & Eastern Ry. Co. 1st Mtg. 3¼s Series A, Mar. 1, 1970	1,015.00	32.50	
1,000 Kansas City, Mo., 4¼s, Dec. 1, 1945	1,040.00	42.50	
1,000 Louisville & Nashville R.R. Co. 3½s 10 Yr. Unified, Extended to Jan. 1, 1950	1,010.00	52.50	
1,000 Louisville & Nashville R.R. Co. 4s 20 Yr. Gold Unified, Extended to Jan. 1, 1960	1,005.00	60.00	
1,000 Monongahela Ry. Co. 3¼s Feb. 1, 1966, 1st Mtg. Series B	1,025.00	13.36	
2,000 N. Y. Central R.R. S. F. Sec. 3¾s, Apr. 1, 1946	1,960.00	75.00	
1,200 N. Y., Chicago & St. Louis R.R. Notes 6s, June 1, 1950	1,200.00	72.00	
800 Pittsburgh & West Virginia Equipment Trust 3½s, Apr. 1, 1944	801.25	17.12	
1,000 Quebec, Province of, 3s, July 15, 1952	984.14	30.00	
2,000 Shell Union Oil 2½ Deb., July 1, 1954	1,930.56	15.98	
1,000 Southern Pacific Co. Equip. Trust Series R 2¼s, June 1, 1945	1,035.60	9.00	
1,000 Southern Pacific Co. Equip. Trust Series R 2¼s, June 1, 1945	1,037.90	9.00	
500 Swampscott, Mass., Series D 3½s, Sept. 1, 1942	510.00	17.50	$10.00
1,000 The Texas Corp. C 3s, May 15, 1965	1,030.00	30.00	
2,000 Toledo Edison Co. 1st Mtg. 3½s, July 1, 1968	2,030.00	70.00	
— U. S. A. Treasury Note Series A 1½s, Mar. 15, 1941		7.50	
200 U. S. A. Treasury Bond 2¼s, June 15, 1954-56	200.00	2.26	
1,000 U. S. A. Treasury 2½s, Sept. 15, 1950-52	1,000.00	25.00	
1,000 U. S. A. Treasury Bond 2s, Dec. 15, 1950-48	1,000.00	10.00	
4,000 U. S. A. Defense Bond, Series F Dated May, 1941, Due 12 Yrs. from Date	2,960.00		
3,000 U. S. A. Treasury Bonds 2½s 1952-54 (Registered)	3,000.00	34.24	
2,000 Virginian Ry. Co. 1st & Ref. Mtg. Series A 3¾s, Mar. 1, 1966	2,045.00	75.00	
1,000 Youngstown Sheet & Tube Co. 1st Mtg. Series D 3¼s, Nov. 1, 1960	1,030.00	32.50	
— Boston Medical Library Note, Extended to Apr. 1, 1942, @ 3%	19,000.00	688.75	
Totals	$62,074.95	$1,899.06	$10.00
Less bond premiums charged off		10.00	
Net income transferred to Building Fund Principal		$1,889.06	

SCHEDULE A EXHIBIT 3

GENERAL FUND, DECEMBER 31, 1941

	Securities and Cash	Income	Premium Charged Off
Cash — Merchants National Bank, Boston	$9,865.51		
Cash — New England Trust Company, Boston	4,503.31		
Deposit — Franklin Savings Bank Book No. 35649	1,074.48	$21.48	
— Appalachian Electric Power Co. 4s, Feb. 1, 1963		56.34	
$2,000 Atlantic Coast Line R.R. Co. 1st Cons. Mtg. 4s, July 1, 1952	1,503.04	80.00	
2,000 Bethlehem Steel Corp. 3½s Cons. Mtg. Series H, Feb. 1, 1965	2,000.00	65.00	
3,000 Blackstone Valley Gas & Electric Co. Series D 3½s, Dec. 1, 1968	3,142.50	105.00	
1,000 Blackstone Valley Gas & Electric Co. Series C 4s, Nov. 1, 1965	1,025.00	40.00	
2,000 Boston & Albany R.R. 1st Mtg. 4½s, Apr. 1, 1943 (Guaranteed)	1,935.00	90.00	
— Boston Elevated Ry. 4½s, Nov. 1, 1941		127.50	$87.50
1,000 Canadian National Railways Equip. Trust Series L 4½s, June 1, 1945	1,015.00	29.25	
1,000 Canadian Pacific Ry. Equip. Trust Series C 4½s, Dec. 1, 1943	1,070.00	45.00	16.25
2,000 Carolina, Clinchfield & Ohio Ry. Series A 4s, Sept. 1, 1965	2,050.00	80.00	
— Central Illinois Public Service Co. 1st Mtg. Series A 3¾s, Dec. 1, 1968		75.00	
— Chesapeake & Ohio R.R. (Warm Springs Valley Branch) Gold 5s, Sept. 1, 1941		25.00	10.00
5,000 Chesapeake & Ohio Ry. Co. Ref. & Imp. 0.85% Series G, Feb. 1, 1944	5,000.00	17.47	
2,000 Chicago, Burlington & Quincy R.R. Co. 1st Ref. Series A 5s, Feb. 1, 1971	2,155.70	100.00	
5,000 City of Cleveland Water Works 5s, June 1, 1942	5,110.00	6.94	5.50
2,000 City of Providence, R. I., Sewer Loan 4½s, Apr. 1, 1942	2,052.50	90.00	60.00
— Commonwealth of Mass. 3½s, Jan. 1, 1941 (Reg.)		17.50	
1,000 Commonwealth of Mass. 3½s, Jan. 1, 1942 (Reg.)	1,020.00	35.00	20.00
1,000 Connecticut River Power Co. 1st 3¾s Series A, Feb. 15, 1961	1,045.00	37.50	
2,000 Consolidated Edison Co. of N. Y. Inc. 3½s Deb., Jan. 1, 1958	2,035.00	70.00	
2,000 Consumers Power Co. 1st Mtg. 3¼s, Nov. 1, 1969	2,110.00	65.00	
2,000 Conveyancers Title Insurance & Mortgage Co. 4½s, Dec. 1, 1937 (In Default), Written Down	400.00		
5,000 Eastern Railway Co. of Minnesota 1st Mtg. 4s, Apr. 1, 1948 (Reg.)	5,270.00	200.00	30.00
— Elgin, Joliet & Eastern Ry. Co. Series A 1st Mtg. 3¼s, Mar. 1, 1970		104.00	
2,000 Erie Railroad Co. Ohio Div. 3½s, Sept. 1, 1971 (Temporary Certificate)	2,000.00	10.83*	
1,000 Fort Street Union Depot Co. 1st Mtg. 3¾s, Dec. 1, 1965	1,000.00	37.50	
— General Motors Acceptance Corp., Dec. 31, 1941		21.88	
2,000 Great Northern Ry. Co. Gen. Mtg. B 5½s, Jan. 1, 1952	1,932.50	110.00	
1,000 Great Northern Ry. Co. 1st & Ref. 4½s, July 1, 1961	990.30	42.50	
1,000 Great Northern Ry. Co. Gen. Mtg. Gold Series I 3¾s, Jan. 1, 1967	975.00	37.50	
2,000 Hiram Walker-Gooderham & Worts Ltd., .50%, Nov. 1, 1942	2,000.00	.67*	

2,000 Hiram Walker-Gooderham & Worts Ltd., 1.00%, Nov. 1, 1943	2,000.00	1.33*	
1,000 Jacksonville Terminal Co. Series B 6s Ref. & Ext. Mtg. Gold, July 1, 1967	1,065.00	60.00	
1,000 Jersey Central Power & Light Co. 3½s, 1st Mtg., Mar. 1, 1965	1,025.00	59.79	
1,000 Louisville & Nashville R.R. Co. 3½s, Unified Mtg. Extended to Jan. 1, 1950	1,010.00	17.50	
1,000 Louisville & Nashville R.R. Co. 4s Unified Gold Extended to Jan. 1, 1960	1,005.00	20.00	
3,000 International Paper Co. Ref. Series A 6s, Mar. 1, 1955	3,076.00	180.00	
— Jones & Laughlin Steel Co. 1st Mtg. Series A 4½s, Mar. 1, 1961		21.25	
— Koppers Co. 1st & Col. Trust Series A 4s, Nov. 1, 1951		21.00	
— Lone Star Gas Corp. 3½s S. F. Deb., Aug. 1, 1953		20.42	
2,000 Metropolitan Ice Co. 1st Mtg. Series A 7s, Jan. 1, 1954	2,100.00	140.00	
1,000 Monongahela Ry. Co. 1st Mtg. Series B 3½s, Feb. 1, 1966	1,025.00	13.36	
540 National Bondholders Corp. Partic. Ctf. (In Default)	540.00		
2,000 New Brunswick, Province of, Deb. 3s, July 1, 1944	2,000.00	60.00	
1,000 New Brunswick, Province of, Deb. 3½s, July 1, 1949	1,000.00	35.00	
2,000 New York Connecting R.R. Co. 1st Mtg. Series A 3½s, Oct. 1, 1965	2,040.00	70.00	
— New York, State of, World War Bonus Fund 4½s, Apr. 1, 1941		85.00	40.00
1,000 N. Y. Central R.R. S. F. 3½s, Apr. 1, 1946 (Secured)	980.00	37.50	
1,000 N. Y., Chicago & St. Louis R.R. Co. 1st Mtg. 3½s Extended to Oct. 1, 1947	937.50	35.00	
600 N. Y., Chicago & St. Louis R.R. 6% Notes June 1, 1950	600.00	36.00	
1,000 Ohio Edison Co. 1st Mtg. 4s, Sept. 1, 1967	1,005.00	82.78	
— Peoples Gas Light & Coke Co. 1st & Ref. Series D 4s, June 1, 1961		30.11	
1,000 Quebec, Province of, 3s, July 15, 1950	995.37	30.00	
3,000 Remington Rand Inc. S. F. Deb. 3½s, July 1, 1956 (Temporary Ctf.)	3,112.50	8.75*	
1,000 Revere Copper & Brass Inc. 1st Mtg. 3¼s, Nov. 15, 1960	1,025.00	32.50	
2,000 Richmond Terminal Ry. Co. 1st Mtg. 3½s, Sept. 1, 1965	2,100.00	67.50	
2,000 So. Pacific (Ore. Lines) 1st Mtg. Series A 4½s, Mar. 1, 1977	1,605.00	90.00	
1,000 So. Pacific Co. Equip. Trust Series R 2½s, June 1, 1944	1,035.60	9.00	
1,000 So. Pacific Co. Equip. Trust Series R 2½s, June 1, 1945	1,037.92	9.00	
2,000 Texas Corp. Deb. 3s, Apr. 1, 1959	2,020.00	60.00	
2,000 Texas Corp. 3s, May 15, 1965	2,060.00	60.00	
1,000 The Dow Chemical Co. Deb. 2½s, Sept. 1, 1950	1,015.00	22.50	
1,000 Toledo Edison Co. 1st Mtg. 3½s, July 1, 1968	1,015.00	35.00	
5,000 Town of Springfield, Vt., 2½s, Nov. 15, 1942	5,045.00	7.50	45.00
— Troy, N. Y. (Harbor & Docks) 4½s, July 1, 1941		85.00	40.00
3,000 Union Pacific Equip. Trust Series G 1½s, Oct. 1, 1943 (Temporary Ctf.)	3,057.48	3.25*	
3,000 U. S. Defense Bonds Series G Dated May, 1941, Due 12 Yrs. from date	3,000.00	37.50	
2,200 U. S. A. Treasury 3¼s, Oct. 15, 1945-43	2,200.00	71.50	
— U. S. A. Treasury 3¼s, Aug. 1, 1941		65.00	
3,000 U. S. A. Treasury 3¼s, Oct. 15, 1945-43	3,041.25	97.50	
— U. S. A. Treasury 1½s Series A, Mar. 15, 1941		7.50	
3,000 U. S. A. Treasury 1¾s Series A, Mar. 15, 1942	3,003.44	52.50	
2,000 U. S. A. Treasury 2s 1955-51 (Registered)	2,000.00		
3,000 U. S. A. Treasury 2½s 1972-67 (Registered)	3,000.00	.64	
500 U. S. Treasury Note ¾s Dec. 15, 1945	500.00	3.71	
— U. S. Steel Corp. ½s, May 1, 1941		5.00	
1,000 The Virginian Ry. Co. 1st Lien & Ref. Mtg. Series A 3¾s, Mar. 1, 1966	1,022.50	37.50	
1,000 Westinghouse Elec. & Mfg. Co. Deb. 2½s, Nov. 1, 1951 (Temporary Ctf.)	1,015.00	1.18*	
3,000 Wilson & Co., Inc. Series A 1st Mtg. 4s, July 15, 1955	3,000.00	120.00	
New England Journal of Medicine	1.00		
Manchester, Conn., Note, Aug. 15, 1941		4.00	
Lawrence, Mass., Note, Nov. 14, 1941		5.63	
Totals	$132,595.40	$3,847.04	$354.25
Less bond premiums charged off		354.25	
Net Income		$3,492.79	

*Interest paid out.

SCHEDULE A EXHIBIT 4

BUILDING FUND, DECEMBER 31, 1941

Balance, January 1, 1941		$60,069.95
Additions:		
Income from securities	$1,899.06	
Profit on securities sold	115.94	
Total additions		2,015.00
Total		$62,084.95
Deduction:		
Bond premiums charged off		10.00
Balance, December 31, 1941		$62,074.95

SCHEDULE A EXHIBIT 5

GENERAL FUND, DECEMBER 31, 1941

Balance, January 1, 1941		$122,188.47
Addition:		
Unexpended revenue for the twelve months ended December 31, 1941		12,388.83
Total		$134,577.30
Deductions:		
Library Extension Service	$1,681.90	
Venereal Disease Control	300.00	
Total deductions		1,981.90
Balance, December 31, 1941		$132,595.40

SCHEDULE B

STATEMENT SHOWING THE REVENUE AND EXPENSES OF THE MASSACHUSETTS MEDICAL SOCIETY FOR THE TWELVE MONTHS ENDED DECEMBER 31, 1941

REVENUE

Assessments Received by District Treasurers:		
Barnstable	$530.00	
Berkshire	1,220.00	
Bristol North	680.00	
Bristol South	1,990.00	
Essex North	1,912.00	
Essex South	2,960.00	
Franklin	430.00	
Hampden	3,220.00	
Hampshire	380.00	
Middlesex North	760.00	
Middlesex South	9,630.00	
Middlesex East	1,680.00	
Norfolk	8,001.00	
Norfolk South	1,740.00	
Plymouth	1,385.00	
Suffolk	6,410.00	
Worcester	4,010.00	
Worcester North	980.00	
		$47,918.00
Assessments Received by Treasurer		1,861.00
Nonresident Assessments		1,670.75
Sale of *Directories* and *History*		13.54
Received from Committee of Arrangements		1,065.05
Received for *Journal* from Fellows on active service		32.00
Examination Fees Received by Censors		243.00
Income from Funds:		
Endowment Funds	$588.34	
General Fund	3,492.79	
		4,081.13
Profit on Sale of Securities — General Fund		814.83
Total Revenue		$57,699.30

EXPENSES

Salaries:		
Secretary	$737.50	
Secretary Pro Tem.	750.00	
Executive Secretary	2,800.80	
Treasurer	1,800.00	
		$6,088.30
Expenses of Officers and Delegates:		
President	$174.08	
Secretary	2,407.35	
Treasurer	304.55	
District Treasurers	2,628.25	
Censors	603.00	
Delegates to American Medical Association	427.31	
		6,544.54
General Expenses:		
Maintenance of Society Headquarters (including clerical and other expenses)	$4,463.90	
Shattuck Lecture	200.00	
Cotting Luncheons	485.00	
Standing Committees:		
State and National Legislation	3,850.76	
Public Health	25.00	
Medical Education and Diplomas	19.37	
Ethics and Discipline	58.81	
Public Relations	415.60	
Financial Planning and Budget	22.75	
Obstetrics and Gynecology	110.00	
Publications:		
A. *New England Journal of Medicine*	$17,400.00	
B. *Annual Directory*	202.22	
C. Miscellaneous expense	.70	
	17,602.92	
Medical Defense	853.78	
Medical Preparedness	22.65	
Postgraduate Instruction	230.66	
Executive Committee Expenses	105.00	
		28,466.20
Refunds to District Societies		4,000.00
Refunds to Fellows on active service for six months or more		198.00
Miscellaneous Expenses		13.43
Total Expenses		45,310.47
Unexpended Revenue		$12,388.83

APPENDIX NO. 3

Report of Auditing Committee for Year Ended December 31, 1942

We have examined a statement made by Hartshorn and Walter, accountants and auditors, 50 Congress Street, Boston, submitted to us January 28. They state that they have verified the cash balance by direct correspondence and reconciliation; that the cash receipts as recorded have been deposited and that disbursements are supported by vouchers or canceled checks; and that the securities and related statement of revenue and expenses fairly present the position of the Society on December 31, 1942, and the results of operations for the year ended on that date. They have submitted a statement showing the balance sheet of the Society on December 31, 1942, and a statement showing the revenue and expenses for the Society for the twelve months ended December 31, 1942. There is nothing in the statements concerning the investments made or closed during 1942 or whether there is an increase or decrease in the capital investment.

The by-laws state that the duty of the Auditing Committee is to require examination by a certified public accountant of the assets and securities of the Society in the custody of the Treasurer and the Treasurer's books and accounts. We have talked with the Assistant Treasurer and he has assured us that Hartshorn and Walter have done this thoroughly.

It is also the duty of the Auditing Committee to verify the accountant's examination. In so far as above stated, we have "verified" the accountant's examination. We have not examined the Treasurer's books and accounts nor have we checked the actual assets and securities of the Society.

If the duties of the Auditing Committee as interpreted by the Council are to review the report of the certified public accountant as submitted in order to save the Council's time, the committee believes that it has performed its function. If the duties of the Auditing Committee as interpreted by the Council are to afford assurance to the Council that the finances of the Society are adequately protected, we have not in our opinion fulfilled them. We have been assured that, in the past, auditing committees have confined their work to what we have done.

It is our unverified opinion based on conversations with officers in the Society and a study of the by-laws pertaining to finances and a study of the accountant's report for the year ended December 31, 1942, that the finances of the Society have been and are well administered but that this is due to the unusual ability and devotion of the officers concerned. We do not believe that the Society can feel that its funds are protected by the by-laws. We believe that investments should be under the direction of a professional investment company, and that the report of the accountant should be more complete and include a list of investment transactions. It should also include a statement that the report for the current year is reconciled with the report of the preceding year.

We believe that the duties of the Auditing Committee could better be discharged by a business man trained as a bank examiner.

Francis Cooley Hall, *Chairman*
Burton E. Hamilton

• • •

January 29, 1943.

The Auditing Committee:
Francis C. Hall
Burton E. Hamilton

The Massachusetts Medical Society
8 The Fenway
Boston, Massachusetts

Gentlemen:

At the request of your treasurer, Dr. Charles S. Butler, we have examined the books and accounts of the Massachusetts Medical Society for the twelve months ended December 31, 1942, and submit herewith:

Schedule A: Statement showing the balance sheet of the Massachusetts Medical Society, December 31, 1942.

Schedule B: Statement showing the revenue and expenses of the Massachusetts Medical Society for the twelve months ended December 31, 1942.

The cash balance on December 31, 1942, was verified by direct correspondence and reconciliation. The cash receipts as recorded have been deposited in the bank and disbursements are supported by vouchers or canceled checks.

The securities and savings-bank books were examined or accounted for.

The accompanying balance sheet and related statement of revenue and expenses fairly present the position of the Massachusetts Medical Society on December 31, 1942, and the results of operations for the year ended on that date.

Respectfully submitted,
Hartshorn and Walter.

SCHEDULE A

STATEMENT SHOWING THE BALANCE SHEET OF THE MASSACHUSETTS MEDICAL SOCIETY, DECEMBER 31, 1942

ASSETS

Fund Securities and Cash		
Endowment Funds	$22,166.87	
Building Fund	63,991.80	
General Fund	143,792.60	
Total		$229,951.27

LIABILITIES AND FUND ACCOUNTS

Fund Accounts		
Endowment Funds:		
Shattuck Fund:		
G. C. Shattuck, 1854-1866	$9,166.87	
Phillips Fund:		
Jonathan Phillips, 1860	10,000.00	
Cotting Fund:		
B. E. Cotting, $1,000 — 1876-1881-1887	3,000.00	
		22,166.87
Building Fund		63,991.80
General Fund		143,792.60
Total		$229,951.27

SCHEDULE A EXHIBIT 1

ENDOWMENT FUNDS, DECEMBER 31, 1942

	Securities and Cash	Income
Shattuck Fund		
Annuity Policy — Massachusetts Hospital Life Insurance Co. Certificate No. 438	$9,166.87	$183.34
Phillips Fund		
$10,000 Commonwealth of Massachusetts 3½s Jan. 1, 1944 (Reg.)	10,000.00	350.00
Cotting Fund		
Deposit — Institution for Savings in Roxbury, No. 45252	1,000.00	20.00
Deposit — Provident Institution for Savings, Boston, No. 1828	1,000.00	20.00
Deposit — Suffolk Savings Bank, No. 68364	1,000.00	15.00
Totals	$22,166.87	$588.34

SCHEDULE A EXHIBIT 2

BUILDING FUND, DECEMBER 31, 1942

	Securities and Cash	Income	Premium Charged Off
Cash — New England Trust Co	$3,917.15		
Deposit — Framingham National Bank Savings Dept., Book No. 8592	383.40	$3.80	
Deposit — Franklin Savings Bank, Book No. 172838	1,921.90	37.86	
— Bethlehem Steel Corp. Cons. Mtg. Series H 3¼s, Feb. 1, 1965		19.77	
1,000 Blackstone Valley Gas & Electric Series C 4s, Nov. 1, 1965	1,025.00	40.00	
— Boston & Albany R.R. 1st Mtg. Series A 4½s, Apr. 1, 1943 (Guaranteed)		32.13	
1,000 Canada, Dominion of, 3s, Nov. 15, 1968	972.50	30.00	
1,000 Central Pacific Ry. Co. 1st Ref. Mtg. 4s, Aug., 1949	717.80	40.00	
1,000 Chicago, Burlington & Quincy R.R. Co. 4s, Mar. 1, 1958	977.78	40.00	
5,000 C/D Chicago, R. I. & Pacific Ry. 1st Ref. 4s, Apr. 1, 1934 (In Default), Written Down	400.00		
4,963.73 Conveyancers Title Insurance & Mortgage Co. Parti Mtg. 4½s, Oct. 31, 1939 (In Default), Written Down	1,125.82	102.41	
1,000 Connecticut River Power Co. Series A 3¼s, Feb. 15, 1961	1,045.00	37.50	
1,000 Elgin, Joliet & Eastern Ry. Co. 1st Mtg. Series A 3¼s, Mar. 1, 1970	1,015.00	32.50	
1,000 Kansas City, Mo., 4¼s, Dec. 1, 1945	1,030.00	42.50	$10.00
1,000 Louisville & Nashville R.R. Co. 3½s 10 Yr. Unified Extended to Jan. 1, 1950	1,010.00	35.00	
1,000 Louisville & Nashville R.R. Co. 4s 20 Yr. Gold Unified Extended to Jan. 1, 1960	1,005.00	40.00	
1,000 Monongahela Ry. Co. 1st Mtg. Series B 3¼s, Feb. 1, 1966	1,025.00	32.50	
2,000 N. Y. Central R.R. S. F. Sec. 3¾s, Apr. 1, 1946	1,960.00	75.00	
1,200 N. Y., Chicago & St. Louis R.R. Notes 6s, June 1, 1950	1,200.00	72.00	
800 Pittsburgh & West Virginia Equipment Trust 3½s, Apr. 1, 1944	801.25	28.00	
1,000 Pittsburgh, City of, C 4½s, Dec. 1, 1945	1,040.00	26.75	4.58
1,000 Quebec, Province of, 3s, July 15, 1952	984.14	30.00	
1,000 Quincy, Mass., 3½s, May 1, 1943	1,016.00	35.00	
2,000 Shell Union Oil. Deb. 2½s, July 1, 1954	1,930.56	50.00	
1,000 Southern Pacific Co. Equip. Trust Series R 2¼s, June 1, 1944	1,035.60	22.50	
1,000 Southern Pacific Co. Equip. Trust Series R 2¼s, June 1, 1945	1,037.90	22.50	
— Swampscott, Mass., Series D 3½s, Sept. 1, 1942		17.50	10.00
— Texas Corp. Series C 3s, May 15, 1965		15.92	
2,000 Toledo Edison Co. 1st Mtg. 3½s, July 1, 1968	2,030.00	70.00	
200 U. S. A. Treasury Bond 2¼s, June 15, 1954-56	200.00	4.50	
1,000 U. S. A. Treasury 2½s, Sept. 15, 1950-52	1,000.00	25.00	
1,000 U. S. A. Treasury Bond 2s, Dec. 15, 1950-48	1,000.00	20.00	
4,000 U. S. A. Defense Bonds Series F 2½s, Dated May, 1941, Due 12 Yrs. from Date	2,960.00		
3,000 U. S. A. Treasury Bonds 2½s 1952-54 (Reg.)	3,000.00	75.00	
2,000 Virginian Ry. Co. 1st & Ref. Mtg. Series A 3¾s, Mar. 1, 1966	2,045.00	75.00	
1,000 Youngstown Sheet & Tube Co. 1st Mtg. Series D 3¼s, Nov. 1, 1960	1,030.00	32.50	
— Boston Medical Library Note Extended to Apr. 1, 1943, @ 3%	19,000.00	570.00	
30 Shs. G. C. Murphy Co. Pfd. 4¾%	3,150.00	35.63	
Totals	$63,991.80	$1,868.77	$24.58
Less bond premiums charged off		24.58	
Net income transferred to Building Fund principal		$1,844.19	

SCHEDULE A EXHIBIT 3

GENERAL FUND, DECEMBER 31, 1942

	Securities and Cash	Income	Premium Charged Off
Cash — Merchants National Bank, Boston	$7,940.86		
Cash — New England Trust Company, Boston	8,606.46		
Deposit — Franklin Savings Bank, Book No. 35649	1,074.48	$21.48	
— American Tobacco Co. 3s, Apr. 15, 1962		80.59	
$2,000 Atlantic Coast Line R.R. Co. 1st Cons. Mtg. 4s, July, 1952	1,503.04	80.00	
— Bethlehem Steel Corp. Cons. Mtg. Series H 3¼s, Feb. 1, 1965		56.15	
3,000 Blackstone Valley Gas & Electric Co. Series D 3½s, Dec. 1, 1968	3,142.50	105.00	
1,000 Blackstone Valley Gas & Electric Co. Series C 4s, Nov. 1, 1965	1,025.00	40.00	
— Boston & Albany R.R. 1st Mtg. 4½s, Apr. 1, 1943 (Guaranteed)		57.00	
1,000 Canadian National Railways Equip. Trust Series L 4½s, June 1, 1945	1,015.00	45.00	
1,000 Canadian Pacific Railway Equip. Trust Series C 4½s, Dec. 1, 1943	1,070.00	45.00	
2,000 Carolina, Clinchfield & Ohio Ry. Series A 4s, Sept. 1, 1965	2,050.00	80.00	
5,000 Chesapeake & Ohio Ry. Co. Ref. & Imp. Series G 0.85% 3s, Feb. 1, 1944	5,000.00	42.50	
2,000 Chicago, Burlington & Quincy R.R. Co. 1st Ref. Series A 5s, Feb. 1, 1971	2,155.70	100.00	
— Cleveland, City of, Water Works 5s, June 1, 1942		125.00	$110.00
1,000 Connecticut River Power Co. 1st Series A 3¼s, Feb. 15, 1961	1,045.00	37.50	
— Consolidated Edison Co. of N. Y. Inc. Deb. 3½s, Jan. 1, 1958		52.50	
2,000 Consumers Power Co. 1st Mtg. 3¼s, Nov. 1, 1969	2,110.00	65.00	
2,000 Conveyancers Title Insurance & Mtg. Co. 4½s, Dec. 1, 1937 (In Default), Written Down	400.00		
1,000 Dow Chemical Co. Deb. 2¼s, Sept. 1, 1950	1,015.00	22.50	

5,000 Eastern Railway Co. of Minnesota 1st Mtg. 4s, Apr. 1, 1948 (Reg.)	5,270.00	200.00	
2,000 Erie Railroad Co. Ohio Div. 3¼s, Sept. 1, 1971	2,000.00	65.00	
1,000 Fort Street Union Depot Co. 1st Mtg. 3¼s, Dec. 1, 1965	1,000.00	37.50	
2,000 Great Northern Ry. Co. Gen. Mtg. B 5½s, Jan. 1, 1952	1,932.50	110.00	
1,000 Great Northern Ry. Co. 1st & Ref. 4¼s, July 1, 1961	990.30	42.50	
1,000 Great Northern Ry. Co. Gen. Mtg. Gold Series I 3¾s, Jan. 1, 1967	975.00	37.50	
— Hiram Walker-Gooderham & Worts Ltd. 5½s, Nov. 1, 1942		10.00	
2,000 Hiram Walker-Gooderham & Worts Ltd. 1s, Nov. 1, 1943	2,000.00	20.00	
1,000 Jacksonville Terminal Co. Series B Ref. & Ext. Mtg. Gold 6s, July 1, 1967	1,065.00	60.00	
— Jersey Central Power & Light Co. 1st Mtg. 3½s, Mar. 1, 1965		27.90	
1,000 Louisville & Nashville R.R. Co. 3½s Unified Mtg. Extended to Jan. 1, 1950	1,010.00	35.00	
1,000 Louisville & Nashville R.R. Co. 4s Unified Gold Extended to Jan. 1, 1960	1,005.00	40.00	
2,500 International Paper Co. Ref. Series A 6s, Mar. 1, 1955	2,563.33	165.00	
— Massachusetts, Commith. of, 3½s, Jan. 1, 1942 (Reg.)		17.50	20.00
2,000 Metropolitan Ice Co. 1st Mtg. Series A 7s, Jan. 1, 1954	2,080.00	140.00	20.00
1,000 Monongahela Ry. Co. 1st Mtg. Series B 3½s, Feb. 1, 1966	1,025.00	32.50	
3,000 National Bondholders Corp. Partic. Ctf. (In Default)	390.00		
2,000 New Brunswick, Province of, Deb. 3s, July 1, 1944	2,000.00	60.00	
1,000 New Brunswick, Province of, Deb. 3½s, July 1, 1949	1,000.00	35.00	
— Newbury, Mass., Note, Dec. 15, 1942		33.75	
2,000 New York Connecting R.R. Co. 1st Mtg. Series A 3½s, Oct. 1, 1965	2,040.00	70.00	
1,000 New York Central R.R. S. F. 3½s, Apr. 1, 1946 (Secured)	980.00	37.50	
1,000 N. Y., Chicago & St. Louis R.R. Co. 1st Mtg. 3½s Extended to Oct. 1, 1947	937.50	35.00	
600 N. Y., Chicago & St. Louis R.R. Co. 6% Notes, June 1, 1950	600.00	36.00	
1,000 Ohio Edison Co. 1st Mtg. 4s, Sept. 1, 1967	1,005.00	40.00	
— Pittsfield, Mass., Due Nov. 23, 1942		9.64	
— Providence, City of, R. I., Sewer Loan 4½s, Apr. 1, 1942		45.00	52.50
1,000 Quebec, Province of, 3s, July 15, 1950	995.37	30.00	
3,000 Remington Rand Inc. S. F. Deb. 3½s, July 1, 1956	3,112.50	105.00	
1,000 Revere Copper & Brass Co. 1st Mtg. 3¼s, Nov. 15, 1960	1,025.00	32.50	
2,000 Richmond Terminal Ry. Co. 1st Mtg. 3½s, Sept. 1, 1965	2,100.00	67.50	
2,000 So. Pacific (Ore. Lines) 1st Mtg. Series A 4½s, Mar. 1, 1977	1,605.00	90.00	
1,000 So. Pacific Co. Equip. Trust Series R 2¼s, June 1, 1944	1,025.00	22.50	10.60
1,000 So. Pacific Co. Equip. Trust Series R 2½s, June 1, 1945	1,037.92	22.50	
— Springfield, Vt., 2¼s, Nov. 15, 1942		112.50	45.00
2,000 Texas Corp. Deb. 3s, Apr. 1, 1959	2,020.00	60.00	
— Texas Corp. 3s, May 15, 1965		4.91	
1,000 Toledo Edison Co. 1st Mtg. 3½s, July 1, 1968	1,015.00	35.00	
5,000 Troy, N. Y., 4½s, Feb. 1, 1943	5,031.64	74.38*	
3,000 Union Pacific Equip. Trust Series G 1½s, Oct. 1, 1943	3,040.00	45.00	17.48
3,000 U. S. Defense Bonds G 2½s, dated May, 1941, Due 12 yrs. from date	3,000.00	75.00	
2,200 U. S. A. Treasury 3¼s, Oct. 15, 1945-43	2,200.00	71.50	
3,000 U. S. A. Treasury 3¼s, Oct. 15, 1945-43	3,025.00	97.50	16.25
— U. S. A. Treasury Series A 1¼s, Mar. 15, 1942		17.40	
2,000 U. S. A. Treasury 2s, 1955-51 (Reg.)	2,000.00	40.00	
5,000 U. S. A. Treasury 2s, 1949-51	5,000.00	33.42	
3,000 U. S. A. Treasury 2½s, 1972-67 (Reg.)	3,000.00	67.75	
500 U. S. Treasury Note ¾s, Dec. 15, 1945	500.00	3.75	
2,000 U. S. A. Treasury ⅞s, Nov. 2, 1943	2,000.00		
1,000 Virginian Ry. Co. 1st Lien & Ref. Mtg. Series A 3¾s, Mar. 1, 1966	1,022.50	37.50	
1,000 Westinghouse Electric & Mfg. Co. Deb. 2½s, Nov. 1, 1951	1,015.00	21.25	
3,000 Wilson & Co. Series A 1st Mtg. 4s, July 15, 1955	3,000.00	120.00	

Massachusetts Medical Service — Demand Loan	25,000.00		
New England Journal of Medicine	1.00		
Totals	$143,792.60	$3,635.61	$291.83
Less bond premiums charged off		291.83	
Net Income		$3,343.78	

*Interest paid out.

SCHEDULE A EXHIBIT 4

BUILDING FUND, DECEMBER 31, 1942

Balance, January 1, 1942		$62,074.95
Additions:		
Income from Securities	$1,868.77	
Profit on Securities Sold	72.66	
Total Additions		1,941.43
Total		$64,016.38
Deduction:		
Bond Premiums Charged Off		24.58
Balance, December 31, 1942		$63,991.80

SCHEDULE A EXHIBIT 5

GENERAL FUND, DECEMBER 31, 1942

Balance, January 1, 1942		$132,595.40
Additions:		
Expenses included in 1942 but entered in Cash Book in January, 1943	$1,650.03	
Unexpended Income for the Twelve Months ended December 31, 1942	10,463.42	
Total Additions		12,113.45
Total		$144,708.85
Deductions:		
Amount received from *New England Journal of Medicine* in January, 1943, credited on books in December, 1942	$900.00	
November coupon of Revere Copper & Brass, Inc., included in 1942 income but not deposited	16.25	
Total Deductions		916.25
Balance, December 31, 1942		$143,792.60

SCHEDULE B

STATEMENT SHOWING THE REVENUE AND EXPENSES OF THE MASSACHUSETTS MEDICAL SOCIETY FOR THE TWELVE MONTHS ENDED DECEMBER 31, 1942

REVENUE

Assessments Received by District Treasurers		$48,666.39
Assessments Received by Treasurer		516.00
Nonresident Assessments		1,738.25
Sale of *Directories* and Royalties		17.30
Received from Committee of Arrangements		3,287.75
Received for *Journal* from Fellows on Active Service		139.80
Examination Fees Received by Censors		558.00
Income from Funds:		
Endowment Funds	$588.34	
General Fund	3,343.78	
		3,932.12
Profit on Sale of Securities — General Fund		288.65
Total Revenue		$59,144.26

EXPENSES

Salaries:		
Secretary	$3,000.00	
Executive Secretary	3,000.00	
Treasurer	1,500.00*	
		$7,500.00

Expenses of Officers and Delegates:		
President	$193.52	
Secretary	3,243.37	
Treasurer	574.69	
District Treasurers	2,469.19	
Censors	273.00	
Delegates to American Medical Association	408.24	
		7,162.01
General Expenses:		
Maintenance of Society Headquarters (including clerical and other expenses)	$4,256.82	
Shattuck Lecture	200.00	
Cotting Luncheons	447.50	
Legislation	21.02	
Public Health	10.70	
Medical Education and Diplomas	8.73	
Ethics and Discipline	47.96	
Public Relations	1,934.42	
Examination of W. P. A. Records	2.74	
Memberships	9.35	
Finance	.96	
Publications:		
A. *New England Journal of Medicine*	$19,100.00	
B. *Directory*	1,841.53	
	20,941.53	
Revision of By-laws	297.34	
Medical Defense	822.02	
Postgraduate Instruction	694.55	
Executive Committee Expenses	130.98	
		29,826.62
Refunds to District Societies		4,000.00
Refunds to Fellows on Active Service		16.00
Listing Members in Forces		1.70
Miscellaneous Expenses		174.51
Total Expenses		48,680.84
Unexpended Revenue		$10,463.42

APPENDIX NO. 4

Report of the Treasurer

It is unfortunate that Dr. Butler cannot be with us to present the Treasurer's report for 1942, but his illness has made this impossible. It has also prevented his compiling a report.

Therefore I am simply submitting the bare figures for 1942 without any personal comments.

In 1942, revenues from resident dues were $49,182.39 as compared with $49,779.00 from the same source in 1941. Nonresident dues were $1738.25 as compared with $1670.75 in 1941. The combined annual dues were therefore $50,920.64. Other revenues were as follows: from invested funds (not including the Building Fund), $3932.12; from sales, $17.30; from profits on securities sold, $288.65; from booths at the annual meeting, $3287.75; received for the *New England Journal of Medicine* from fellows in active service, $139.80; and from examinations by censors, $558.00. Hence the total revenue to the Society amounted to $59,144.26, an increase of $1444.96 over 1941.

The Building Fund received an income of $1844.19 and profit from sales of securities amounted to $72.66. The total Building Fund now stands at $63,991.80.

In 1942, total expenses were $48,680.84, with an unexpended revenue of $10,463.42 as compared with total expenses of $45,310.47 and an unexpended revenue of $12,388.83 in 1941.

The Society ends 1942 with total assets of cash and securities of $229,951.27, and unexpended revenues of $10,463.42.

Eliot Hubbard, Jr., *Treasurer* pro tempore

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Résumé of Finances for 1942, in Comparison with 1941

Disbursements

	1941	1942
Salaries:		
Secretary and Secretary *pro tem.*	$1487.50	$3000.00
Executive Assistant	2800.80	3000.00
Treasurer	1800.00	1500.00
Expenses of Officers and Delegates:		
President	174.08	193.52
Secretary	2407.35	3243.37
Treasurer	304.55	574.69
District treasurers	2628.25	2469.19
Censors	603.00	273.00
Delegates to American Medical Association	427.31	408.24
General Expenses:		
Maintenance of Society Headquarters	4463.90	4256.82
Shattuck Lecturer	200.00	200.00
Cotting luncheons	485.00	447.50
Committee Expenses:		
Publications		
A. *New England Journal of Medicine*	17,400.00	19,100.00
B. *Annual Directory*	202.92	1841.53
Ethics and Discipline	58.81	47.96
Medical Education and Diplomas	19.37	8.73
State and National Legislation	3850.76	21.02
Public Health	25.00	10.70
Medical Defense	853.78	822.02
Public Relations	415.60	1934.42
Postgraduate Medical Instruction	230.66	694.55
Medical Preparedness	22.65	—
Financial Planning and Budget	22.75	.96
Executive Committee	105.00	130.98
Examination of WPA Records	—	2.74
Membership	—	9.35
Revision of By-Laws	—	297.34
Special Appropriations:		
Obstetrics and Gynecology	110.00	—
Refund to district societies	4000.00	4000.00
Refunds to fellows on active service	198.00	16.00
Miscellaneous	13.43	174.51
Listing members in forces	—	1.70
Total expenses	$45,310.47	$48,680.84
Unexpended revenue	12,388.83	10,463.42
	$57,699.30	$59,144.26

Revenues	1941	1942
Assessments		
Paid by resident fellows:		
To district treasurers	$47,918.00	$48,666.39
To Treasurer	1861.00	516.00
Paid by nonresident fellows	1670.75	1738.25
Sales of *Directory* and *History*	13.54	17.30
Income:		
Shattuck Fund	183.34	183.34
Phillips Fund	350.00	350.00
Cotting Fund	55.00	55.00
General Fund	3492.79	3343.78
Other Revenue:		
From Committee of Arrangements	1065.05	3287.75
Received from fellows for *Journal*	32.00	139.80
Received for examinations by censors	243.00	558.00
Profits on sales of securities	814.83	288.65
	$57,699.30	$59,144.26

APPENDIX NO. 5

Report of the Executive Committee

The Executive Committee of the Council has had two meetings since its report to the Council in October. The first of these was held on October 21, 1942, and the second on December 30, 1942.

The October meeting was of an emergency character. It was called for the purpose of giving consideration to a proposition advanced by the Massachusetts Board of Registration in Medicine as the result of a conference that this Board had with Dr. Frank H. Lahey, chairman of the Procurement and Assignment Service, Dr. Reginald Fitz, Massachusetts chairman of this agency, Dr. George Leonard Schadt, Dr. Roger I. Lee and the Secretary.

The proposition is briefly stated in a vote which was adopted by the Board of Registration in Medicine, on October 14, 1942:

Voted to ask the Governor of Massachusetts to waive the law (Chapter 112, Section 2, T. E.) to the effect that we may temporarily permit members of the medical profession, who are graduates of approved schools, who are registered to practice in other states and who are recommended by the National Procurement and Assignment Service, to practice in Massachusetts during the emergency without payment of the registration fee, and without examination.

This action on the part of the Board grew out of representations made by the National Procurement and Assignment Service, through its chairman, Dr. Frank H. Lahey.

This agency in these representations stated that its objectives were twofold: to supply the armed forces with physicians, dentists and veterinarians and at the same time to provide sufficient numbers of these groups to care properly for civilian needs.

These representations went on to speak of some of the difficulties with which the agency was meeting in maintaining adequate medical care for civilians in certain parts of our country. One of these had to do with such strictures laid down by state licensing laws as prohibited a physician licensed in one state from practicing his profession in another without first fulfilling all the requirements — examination and so forth — of the second state.

If certain parts of these laws might be modified or waived for the duration of the emergency, the job of procurement and assignment would to this extent be made easier.

Dr. H. Quimby Gallupe, secretary of the Massachusetts Board of Registration in Medicine, was present at the meeting of the committee. He explained that, when the action of the Board was called to Governor Saltonstall's attention, the latter expressed his willingness to use his wartime emergency powers in this direction provided the approval of the Massachusetts Medical Society was obtained.

It was unanimously voted by the Executive Committee to approve this act of the Massachusetts Board of Registration in Medicine.

The actual drawing up of such an act is the duty of the Attorney General. When this matter was placed before the latter, he advised against it because he could not be convinced of its need in Massachusetts at that time. He expressed himself, however, as without prejudice against the time when the need might arise in this state. He also spoke of the possibility of legislative enactment along these lines.

The Executive Committee has also given consideration to this latter course of action, particularly since the receipt by the Secretary on December 10, 1942, of a communication from the Federation of State Medical Boards, acting through its executive committee in joint conference with the Directing Board of Procurement and Assignment Service. This letter includes a draft of proposed legislation and a statement of certain principles which should govern it.

The Executive Committee, at this time, recommends adversely in the matter of seeking in Massachusetts legislative action to this end. It does so because it believes the Legislature is sure to ask the same question as did the Attorney General as to the need of modifying the law at the present time in this state and because a directive from the Governor, when and if such a need develops, is much the simpler approach.

The Executive Committee, acting on the recommendation of the Committee on Membership, has

(1) Retired the following fellows:
James Alfred, Brockton
William G. Curtis, Wollaston
Stephen R. Davis, Lynn
Charles Dudley, Kingston
Everett V. Hardwick, Milton
Charles H. Hare, Boston
John F. Jordan, Peabody
J. Herbert Libby, Weymouth
Robert G. Loring, Concord
Charles J. Spaid, Springfield
John J. Sullivan, Dorchester

(2) Restored the following physicians to fellowship provided all their obligations to the Society are discharged within one month:
Fredcrick W. Celce, Holyoke
Henry A. Dunphy, Palmer
Benoit W. Garneau, Fall River
Bert B. Hershenson, Brookline
Thomas H. Kenney, Northampton
Charles Liebman, Brookline
John J. Sullivan, Dorchester
David Zacks, Brookline

(3) Accepted the resignations of the following fellows:
Harold D. Chope, Brazil (with remission of dues)
Harold I. Gosline, Amarillo, Texas
Grosvenor B. Pearson, Pittsburgh, Pennsylvania
Harry A. Warren, Champaign, Illinois

The Executive Committee has reviewed the report of the Committee on Membership as it refers to a former member who was asked to resign and who now seeks restoration to fellowship. The Executive Committee recommends the adoption of this report.

The Executive Committee has reviewed the budget for 1943, presented by the Committee on Finance, and recommends its adoption.

The committee has reviewed the report of the Committee on Public Relations and recommends the adoption of its recommendation.

The committee has reviewed the report of the Committee on Medical Education, anent the nursing situation. It commends this report to the attention of the Council.

The committee reviewed the report of the Committee on Arrangements and approves the recommendations contained therein.

The President was in receipt of the following communication from Dr. Reginald Fitz, Massachusetts chairman of Procurement and Assignment Service:

Office of Defense Health and Welfare Services
Procurement and Assignment Service

Office of State Chairman
319 Longwood Avenue, Boston

December 7, 1942

Dr. George L. Schadt
44 Chestnut Street
Springfield, Massachusetts

Dear Dr. Schadt:

A curious finding has arisen which it seems to me deserves consideration. Approximately 1900 Massachusetts doctors (1942 *American Medical Directory*) have commissions or have had commissions with honorable discharge in one of the branches of the armed forces. Of these 1900, only 1050 are members of the Massachusetts Medical Society. Of the 850 commissioned officers who are not members of the Society, 200 in round numbers are substandard school graduates and not necessarily

desirable for the Society to worry about. That leaves a pool of about 650 young men who represent sort of a floating medical population.

In this pool are interns, residents, fellows, junior teachers in medical schools who come here for two or three years and such people. Potentially, in normal times, they represent a valuable part of our medical population because practically all are engaged in full-time work or are active in research or teaching. I raise the question whether the Society and the Boston Medical Library might not make some effort to attract men of this type.

Could we not offer some sort of a junior or temporary membership to both organizations at a reduced fee, and would it not be worth while for these organizations to stir themselves up in order to make their work as appealing as possible to men of this type? What is your thought on the matter?

As ever,

REGINALD FITZ, M.D., *Chairman*
Massachusetts State Committee

The committee recommends that this matter be referred to the Committee on Membership.

The Secretary was in receipt of a telegram from Dr. Olin West, secretary of the American Medical Association, recommending the creation of a committee in the Massachusetts Medical Society to be known as a War Participation Committee. The committee recommends that the President be authorized to appoint a committee of five to serve this purpose.

The President was in receipt of a letter from Dr. Charles S. Butler, treasurer of the Massachusetts Medical Society, requesting an indefinite leave of absence because of ill health. The committee recommends that Dr. Butler's request be granted, that the Council express its great thanks for his fine service to our organization and its regret that he has found such a step necessary.

The committee approves of the recommendation of the Committee on Finance that Dr. Butler's salary be paid to him up to and including December 31, 1942.

The committee also approves of the recommendation of the Committee on Finance with regard to the figure set as compensation for the Treasurer *pro tempore*.

The President received the following letter:

December 30, 1942

Dr. George Leonard Schadt, President
Massachusetts Medical Society
Boston, Massachusetts

Re: Gift to Massachusetts Medical Society

Dear Doctor:

Enclosed please find my check for $1000 as a gift to the Massachusetts Medical Society, to be used in carrying out its usual functions as an educational body.

I would suggest that — though I do not make it a binding condition of the gift — this fund be used to procure any necessary lunches for the official meetings of the Committee on Ethics and Discipline. I have in mind the many hours spent and the difficult problems dealt with, not hastily, at such meetings.

Please advise me whether the Society will accept this gift.

Sincerely,

WILLIAM J. BRICKLEY, M.D.

The committee offers three recommendations with regard to this gift:

(1) That it be accepted by the Council with thanks.

(2) That it be used to create a fund which shall be known as the Dr. William J. Brickley Fund.

(3) That it be used for the purpose outlined in Dr. Brickley's letter until otherwise ordered by the Council.

The President announced to the committee certain *ad interim* appointments. These appointments, which will be read later in the meeting, have the approval of the committee.

MICHAEL A. TIGHE, *Secretary*

APPENDIX NO. 6

REPORT OF THE COMMITTEE ON PUBLICATIONS

The committee has secured to deliver the Shattuck Lecture at the annual meeting of the Society in May, 1943, Dr. George W. Thorn, Hersey Professor of the Theory and Practice of Physic at Harvard University and physician-in-chief at the Peter Bent Brigham Hospital.

The committee has continued to supervise the publication of the *New England Journal of Medicine*. Under the able editorship of Dr. Robert N. Nye, the *Journal* has maintained its high quality as one of the leading medical publications in this country. The Society has reason to feel proud of the *Journal*. That the *Journal* is valued outside of the Society is evidenced by the increasing circulation among nonmembers.

We quote from Dr. Nye's report to the committee:

During 1942, the *New England Journal of Medicine* received 1984 new "outside" subscriptions, a total that is over 50 per cent greater than the total received in 1941. Of these subscriptions, 1085 were from regular subscribers and 899 from medical students. As would be expected, there were many cancellations, undoubtedly owing to enlistment in the armed forces; the net increases were 216 regular subscribers and 711 medical students, which total 927. As of December 31, 1942, journals were being sent to 5083 members of the Society (a decrease of 74 from the 1941 figure), 3462 regular subscribers and 1193 medical students, a total of 9738, which is greater by 853 than the total for 1941. This does not include 348 members of the New Hampshire Medical Society, who receive the *Journal* once a month.

The editorial board took action on 238 manuscripts during 1942, a decrease of 90 compared with the figure for 1941. Of these papers, 169, or 71 per cent, were accepted.

Operations for the year resulted in a net loss of $17,550, which is approximately $2450 less than the amount appropriated by the Society. The net cost per member of the Society was $3.43, as compared with $3.20 in 1941. There was an increase in operating expenses due to the larger circulation, the increased cost of binding and mailing, and the fact that in 1942 fifty-three issues of the *Journal* were distributed, which happens every seven years, when January 1 falls on a Thursday.

It is difficult to predict what will happen in 1943. Undoubtedly the number of member subscribers will be decreased, owing to their enlistment in the armed forces; on the other hand, it seems likely that the number of "outside" subscribers will hold its own or possibly show a slight increase, in spite of cancellations. Expenses should decrease as a result of lower publication costs (provided the total circulation is smaller) and an increase in advertising revenue, owing to higher rates, which became effective on January 1. The decrease in the number of manuscripts submitted for publication may become a serious problem; in any event, the pagination of the *Journal* will be cut down, since the members of the editorial board believe that the high standards for acceptance should not be lowered. One typist, and probably two, must be added to the office staff, owing to the increased demands of the Society. This, however, will not increase the operating

costs of the *Journal*, since the Society pays for its share of expense.

An abstract of the auditor's report is attached as a part of the report of the committee.

JAMES P. O'HARE
CONRAD WESSELHOEFT
WILLIAM B. BREED
RICHARD M. SMITH, *Chairman*

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New England Journal of Medicine

ACTUAL AND ESTIMATED FIGURES ON OPERATION

	Actual 1941	Estimated 1942	Actual 1942	Estimated 1943
REVENUE				
Advertising	$26,400	$27,000	$27,750	$28,000
Engraving	1,400	1,500	1,650	1,500
Reprints	7,500	7,300	8,500	6,500
Subscriptions	20,400	21,000	22,450	24,500
Miscellaneous	800	800	800	800
	$56,500	$57,600	$61,150	$61,300
EXPENSE				
Publication of *Journal*	$39,600	$43,000	$44,400	$42,000
Publication of reprints	5,200	5,000	6,150	5,000
Office and other salaries	21,400	22,500	21,450	22,000
Commissions, fees and so forth	3,300	3,300	3,250	3,600
Office and sundry expense	3,500	3,500	3,450	3,500
	$73,000	$77,300	$78,700	$75,900
	56,500	57,600	61,150	61,300
LOSS	$16,500	$19,700	$17,550	$14,800
APPROPRIATION	$20,500		$20,000	$15,000
BALANCE	4,000		2,450	
RETURNED TO M. M. S.*	3,100		900	
INCREASE IN CURRENT ASSETS	900		1,550	

*According to agreement with the Committee on Finance that the cash balance of the *Journal* shall not exceed $6,000.

APPENDIX NO. 7

REPORT OF THE COMMITTEE ON MEMBERSHIP

The Committee on Membership, meeting with the supervising censors and in consultation with the Board of Membership of Suffolk District Medical Society together with the Committee on Ethics and Discipline, recommends that the application for reinstatement of Dr. Morris A. Cohen, 452 Beacon Street, Boston, this former fellow's resignation having been requested by the Committee on Ethics and Discipline, shall under the provisions of Chapter I, Section 11, be denied.

The Committee on Membership has received and carefully considered the nomination for honorary fellowship of Dr. Walter Fenno Dearborn by two fellows of the Middlesex South District Medical Society. Dr. Dearborn has gained renown through his achievements and research work in psychology and education at the University of Chicago, University of Wisconsin and now at Harvard University. As director of the Psycho-Educational Clinic of Harvard University he has made noteworthy advancements to arts and sciences and he is already famous for accelerating slow readers. Under the provisions of Chapter I, Section 4, of the by-laws, the Committee on Membership recommends to the Council that associate fellowship be conferred on Dr. Walter Fenno Dearborn, 79 Fresh Pond Parkway, Cambridge, because of his eminent work in the allied sciences.

It is recommended by the Committee on Membership that the following recommendation from the then Committee on Membership passed by the Council on February 5, 1941, be revoked: "Fellows of the Society who are called to full-time service in the United States Army, Navy or Public Health Service during the present emergency and whose livelihood is thereby impaired may, on written application to the Treasurer stating their situation, have their dues remitted for the year of service. A period of full-time service greater than six months shall give the privilege of a year's remission of dues. The *New England Journal of Medicine* will be sent to such members only on payment of an annual fee of four dollars ($4.00). The president of the Society shall determine the end of the present emergency."

The following recommendation in regard to members of the Massachustts Medical Society is urged. "Fellows of the Massachusetts Medical Society who have enlisted or been called to full-time service in the United States armed forces or in the United States Public Health Service during this present war shall have no further dues collected for the duration, their names continued on the membership roll of the society as active members in good standing, and to only such members as request it will the *New England Journal of Medicine* be sent and then only on payment of an annual subscription fee of $4.00 per year. Any members who have joined or who subsequently join the United States armed forces or the United States Public Health Service should advise personally or by some means the treasurer of the Society to facilitate omission of dues. 'For the duration' is interpreted as meaning honorable discharge from the United States armed forces or United States Public Health Service."

It is recommended that a flyer of this recommendation be attached to every bill or communication relating to indebtedness sent from the Treasurer's Office of the Massachusetts Medical Society to its members.

HARLAN F. NEWTON, *Chairman*

APPENDIX NO. 8

REPORT OF THE MASSACHUSETTS COMMITTEE, PROCUREMENT AND ASSIGNMENT SERVICE FOR PHYSICIANS

Your committee has completed a year of active service under war conditions. During the year 1942, and up to January 15 of this year, 3743 Massachusetts physicians were classified. Massachusetts is credited with having 4366 doctors under forty-five years in age. Practically, therefore, most of our doctors of military age have now been examined by local Procurement and Assignment committees, and have been reported to the central committee in Washington as "available" for military service or "essential" to civilian needs. To accomplish such a task has been time consuming and has required hard work and great patience. Your committee is grateful to each member of each local committee for his assistance.

An analysis of our 3743 clearances brings out interesting information. A summary is as follows: 1477 commissioned in Army (39 per cent); 443 commissioned in Navy (12 per cent); 542 declared "essential" (14 per cent); 373 applied for commissions but rejected (10 per cent); and 908 declared "available" but have not applied for commissions (24 per cent).

It is believed that 2048 physicians from Massachusetts are now serving in the armed forces or have received

honorable discharge therefrom. For in addition to the 1920 officers cleared through your committee and commissioned, are the names of 128 physicians credited to Massachusetts by Washington who obtained commissions without clearance or whose clearance forms have been mislaid.

From time to time Massachusetts has been reprimanded for tardiness in filling its hypothetical quota of physicians needed for military use. The calculations involved in determining the quota are complicated. For example, a number of men listed in the *American Medical Directory* as belonging to Massachusetts may have Selective Service boards in other states; and, conversely, a number of young Massachusetts physicians with local boards here may have been at work outside of Massachusetts and may have been cleared through state committees elsewhere. The figures reported here deal with your committee's personal experience and with doctors listed as at work in Massachusetts according to the two latest directories. The committee believes that these figures illustrate the problem which Massachusetts faces. Each doctor on our records who is in the service has been withdrawn from the State and the position that he occupied in our civilian medical society must be filled by another or be done away with.

Either through letter or by personal interview we have heard from the majority of the 908 men declared "available" but who so far have not applied for commissions. A variety of reasons, each one logical enough, are brought forward by men who do not wish to volunteer: reasons of economy, or of a family nature, or because a man simply thinks that his talents at present are more useful to the community in which he lives than anywhere else. Your committee has attempted to deal with each case as fairly as possible. Every physician who has been interviewed has appeared to wish to do what is right, and to determine this wisely has always been difficult.

From the 2293 men who were commissioned, or who applied for commissions and were rejected, the following information has been tabulated: 1477 commissioned in Army (64 per cent); 443 commissioned in Navy (20 per cent); and 373 applied for commission but were rejected (16 per cent).

These figures demonstrate that in Massachusetts, the ratio of Army to Navy commissions is about 3:1 and that our rejection rate is in the neighborhood of 16 per cent. Our relatively high rejection rate is due in part to the large number of graduates of substandard domestic schools or foreign schools who are licensed to practice in Massachusetts.

The substandard school problem was of considerable interest to the Society a year ago. An analysis of the fate of 200 such graduates who applied for commissions was made. Of these, 70 per cent were commissioned, 9 per cent were regarded as essential and 21 per cent were rejected. Of all Massachusetts physicians who have entered the armed forces, 11 per cent have been graduates of foreign or substandard domestic schools. It is obvious that the credentials of graduates of our domestic substandard schools and of foreign schools have been weighed carefully in Washington and that great care has been employed in deciding which applicants should receive the honor of a responsible post in the care of soldiers.

On many occasions during the year, your committee has been asked how many members of the Society were in active service. At the present moment (January 15, 1943) of 2048 Massachusetts physicians whom we believe to have been commissioned, only 1122 (55 per cent) are members of the Society. This appears to be due to the fact that young doctors seem in no particular hurry to join the Society. Under ordinary circumstances Massachusetts has proved an admirable training ground and there is a floating medical population of young men who stay here for various lengths of time in some junior capacity. They have an intern's license to practice, they may take the

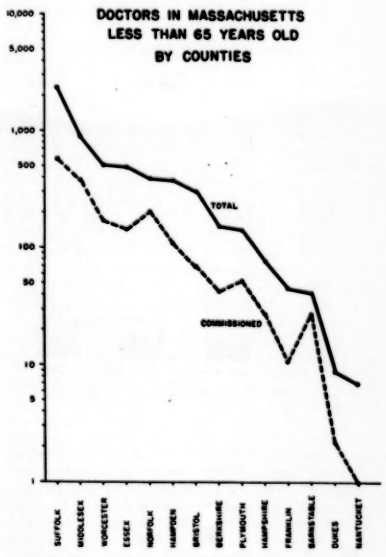

FIGURE 1.

State Board examinations or they may have been certified by the National Board of Medical Examiners. Being uncertain as to where they will settle permanently, they do not take an interest in the affairs of the Massachusetts Medical Society, and besides, they are poor and busy, and have plenty of staff meetings and public lectures to attend. The committee hopes, when the war ends, that a method can be devised to attract such young men into some type of membership in the Society. They have ideas that are worth cultivating.

The experience of the year has been analyzed in a variety of ways in order to develop more detailed information by which to attack the work of 1943 with intelligence. Your committee has been informed by Dr. Lahey, that approximately 400 more doctors must be withdrawn from Massachusetts during 1943 to meet our quota. The type of doctor most urgently needed is the one who is young, preferably under thirty-eight years old.

On Figure 1, the solid line tabulates by counties the number of doctors who are less than sixty-five years old and the dotted line the number of men in each of the counties believed to be commissioned. On the whole, as

can be seen, all over the State there has been a striking parallelism in the ratio between the total number of doctors and those commissioned. Barnstable County appears to have been overgenerous, but otherwise each county appears to have given physicians to the armed forces in about equal proportions. This is a gratifying result.

It seemed of interest to study in greater detail the trends of medical population in cities of different size. With this idea in mind, cities of differing population were analyzed, the doctors of five cities in each group being averaged for those cities with a population up to 100,000; and for three larger cities, Springfield, Worcester and Boston were selected. In order to make results comparable, the physician numbers were expressed in numbers of doctors to 100,000 population. The doctors were broken down into "commissioned," "rejected," "essential," "available" and "unclassified" groupings. The resultant graph (Fig. 2) illustrates what appears to be a consistent trend: the larger the city, the greater in it is the concentration of medical talent. This fact is easily credible for in general the large city in a given locality has several hospitals, acts as consultant to the surrounding territory and thus, by necessity, requires more numerous and highly trained medical manpower than does the small city.

The chart illustrates another peculiarity with which the committee is familiar. The smaller the city, the more is taken as gospel the word "available"; the larger the city, the easier it is for "available" men to do nothing, unwilling to acknowledge that if they left, as Koko sang in the Mikado, "They'd none of 'em be miss'd."

On the other hand, if one takes the trouble to figure out proportions, the proportion of officers to doctors in the different cities is reasonably constant: areas thinly populated have not been allowed to become depopulated medically, except in rare and isolated instances.

Finally, a chart has been constructed wherein is listed each town and city in the State, its population, its doctors, and the number commissioned, declared available, essential or unclassified. Of course the figures change from day to day, but the chart serves a useful purpose in helping your committee to visualize at a given time the ever-changing medical picture.

From all these data, it is possible to predict with reasonable accuracy, the fairest source of the 400 doctors who should be commissioned in 1943, taking into consideration population densities of cities and towns, and numbers of doctors. At this writing the most delinquent areas appear to lie in Suffolk, Berkshire, Essex and Hampden counties, with Barnstable too generous (Table 1). There are various factors responsible for this, the most obvious one being the distribution of men who have applied for commissions but have been rejected. A man may apply for a commission and not receive it. It takes an appreciable time for this to be recorded and even longer for a man previously called "essential" to be declared "available" be-

DOCTORS IN MASSACHUSETTS
ACCORDING TO SIZE OF POPULATION

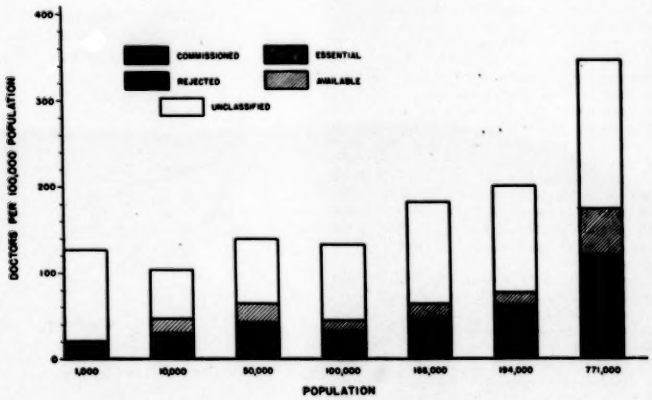

FIGURE 2.

TABLE 1. *Data on Physicians by Counties.*

COUNTY	TOTAL PHYSICIANS UNDER 65	THEORETICAL QUOTA	PHYSICIANS COMMISSIONED	CREDIT OR DEBIT
Barnstable	42	17	28	+ 11
Berkshire	156	70	22	— 48
Bristol	302	110	96	— 14
Essex	499	200	153	— 47
Franklin	46	18	11	— 7
Hampden	379	152	126	— 26
Hampshire	79	32	30	— 2
Middlesex	898	343	367	— 16
Norfolk	398	207	209	+ 2
Plymouth	143	57	52	— 5
Suffolk	2332	882	643	—239
Worcester	504	202	181	— 21

cause a man previously "available" has been rejected and thus is not liable to be taken out of the community. Moreover, interwoven with such a simple arithmetical problem in numbers is the more elusive one of quality. One well-trained essential young man cannot be released even though ten imperfectly qualified physicians from his area apply for commissions and are found unacceptable to the Surgeon General.

If the table is actually filled according to this computation, each part of the State will do its proportionate share in sacrifice of medical care, there will be no depletion, and yet, the curve of doctor-population ratio in cities of differing sizes shown in Figure 2 — which the Commonwealth has found satisfactory in times of peace — will be maintained.

It will not be an easy matter to procure the number of officers expected by Massachusetts in the next few months, for by now most of our young physicians wishing to obtain commissions have done so. On the other hand, Massachusetts is fortunate in having a large supply of doctors so that we can well afford to fill our quota, and moreover, we are blessed with the heritage of patriotism.

H. M. Clute
E. L. Kickham
D. O'Hara
W. H. Pulsifer
B. P. Sweeney
R. Fitz, *Chairman*

APPENDIX NO. 9

Report of the Committee Concerned with Prepayment Medical-Care Costs Insurance

I shall make a report of progress in regard to the Blue Shield.

The first matter concerns the enrollment of participating physicians. At the present time there are between 3300 and 3500 out of 4700 active physicians in the State who have enrolled. When I say 4700, that is an estimate of the men who are eligible to become participating physicians, excluding the men in the services, the men who are in institutions, the men who are in various state departments and the men who have retired. That figure is an estimate that I had from medical headquarters. So that gives a large percentage of participation.

This question of enrollment of physicians is directly related to the question of sales of the contracts, because the general rule through the country, on general medical-care programs, is that it is not safe from the viewpoint of physician participation to begin local sales of the contract until there is at least 50 per cent participation by local physicians. Now, starting with our program, I think our problem is somewhat different. There is apparently need of satisfactory participation by the men to take care of the different services provided for in the first surgical-obstetrical contract, in the various institutions in the districts. What delay has been encountered comes from trying to secure the enrollment of participating physicians so that all districts will be covered. A beginning of sales has been started in the Boston section because of the generous enrollment of the men there. Offhand, it can be said, I believe, that all the services are adequately covered in the hospitals in the main centers throughout the State.

There has been a request that local professional service committees aid the salesmen (laymen) who will be active in trying to contact the many doctors who said they will participate but have not yet signed. Their work can be facilitated greatly if that committee helps them in their approach to the members. They have lists of the men who have not yet sent in their contracts. They have a difficult problem because of gas rationing, which has been the main factor in delaying matters so far. Whatever help can be given locally will be greatly appreciated.

Just one last statement in regard to our approach to this matter on the basis of the partial-coverage contract. We have naturally been subjected to some criticism in getting our program launched with partial coverage rather than with complete medical-care coverage. That we may stabilize ourselves in this decision we have made, I quote two recent experiences that bear out the wisdom of this.

The first is that at a recent meeting at Chicago, where representatives of medical-care plans met, one of the men, from California I believe, said that the approach through complete medical coverage was too idealistic. In Michigan they have definitely stated they have retreated entirely from complete coverage and are starting again on partial coverage. One of the northern New York plans, either Utica or Buffalo, has done the same thing.

I think an impressive thing regarding this matter is a recent announcement in the New York *Herald-Tribune* (January 11, 1943) from Health Group Cooperative, which is supported by funds from several of the large foundations. Their program, in effect, includes nothing more than surgical and obstetrical care in the hospital and home, and medical care only in the hospital. In other words, those who comprised one of the major groups in criticizing the profession for not starting out with complete medical care have apparently had to retrench to the point where they leave out medical care in the home and office. From their experience they have found this a difficult problem to handle. I think coming from a group that so actively propagandized for complete medical care as an initial step, this fortifies us in our feeling that we were wise in our approach through a partial-coverage contract.

James C. McCann, *Chairman*

APPENDIX NO. 10

Report of the Committee on Ways and Means to Conserve Physicians' Energies

Perhaps a third of the able-bodied active practitioners of medicine are now withdrawn from their communities by the war effort. We freely accept this as in the interest of all the people. In some cities all physically fit doctors under forty-five have volunteered. We believe this will not seriously endanger the distribution of really essential medical care. In isolated instances attention has been focused on exceptions where community growth has mushroomed and it is not unnatural that the supply of replacement physicians lags behind the need. In some urban centers it is not yet apparent that there exists a present or potential shortage of doctors. In some of the medical periodicals reports of the measures adopted by organized medicine to adjust for shortage have been recorded. Some of the communities in Massachusetts have organized plans.

Worcester has arranged for coverage of unmet needs for medical service from hospital centers. Each hospital has agreed to try to locate one of the doctors in its section on request. In Haverhill, doctors have volunteered

to respond to night calls when the family physician (if there is one) is not able to comply. Physicians are listed for each night, a month in advance. The telephone office is co-operating. They know who is available for calls

PASTE THIS IN YOUR PHONE BOOK

SOON—
Rationed Medical Care, Too

Haverhill doctors have responded well to the call from the armed services.

There are not as many able bodied younger doctors for the winter load.

Gasoline and tires must be conserved by the doctor, too.

A committee from the medical society is organizing the profession so that the essential quality of medical care will not be impaired.

Will YOU cooperate by:

Making no unnecessary calls?

Making your choice of a family physician and finding what are his office hours?

Calling his office between seven and eight in the morning when requesting house visits?

Being patient until he gets there? (Urgency of the illness and grouping calls by location must influence decision as to who comes first).

Giving your message to the office attendant unless you need to talk with the doctor personally?

Fevers are usually higher at night. If you postpone your decision to call the doctor until evening his capacity for service is impaired.

Arrangements will be made for someone to cover real needs at night.

FIGURE 1.

which come to them directly. This lessens the burden of potential nightwork and is patterned after the Army system of "officer of the day." Excellent co-operative spirit has been manifest.

The accompanying advertisement (Fig. 1) was published in the local paper and some physicians have had reprints with their own office hours appended. One of the local druggists has distributed reprints with his own endorsement.

We would like to call attention to commercial efforts toward public co-operation. Parke, Davis and Company, for example, have an excellent large display card, as well as folders to fit ordinary envelopes. These are dignified, well done and are available to all physicians.

We believe that the manner of handling the problem when and where it exists will vary with each community rather than with the district society. The medical profession in each community should assume responsibility for distribution of reasonably adequate medical care. This may well include institutional and nursing care as well as increased concern for public-health matters.

We believe that the Society can be a clearinghouse for new and better approaches. The American Medical Association has included this matter in its "Doctors at War" radio series on a national hookup. We believe that local stations should be encouraged to include "Doctors at War" in their broadcasting programs as a public service. We believe that it may soon become desirable to co-operate with local stations for "flash" broadcasts of local conditions.

We believe that we should inform ourselves concerning and co-operate with hospitals', nurses', dentists' and druggists' adjustments to shrinking personnel and supply.

The matter of rationing hospital beds must be considered. We believe that hospitals can more effectively meet this problem by obtaining the assistance and co-operation of the staff in connection with admissions and demissions. This would demonstrate to the physicians so serving, and through them to the rest of the staff, their own obligation to censor potential admissions.

We like to believe that we have available an organization to apprehend and meet problems of distribution in medical care before they reach the stage of public indignation. Some newspapers have already indicated their belief that organized medicine has defaulted in this instance.

The Committee on Public Relations would seem to be an appropriate clearinghouse to initiate remedies. The chairman of the district committee is the delegate to the central committee. Most districts also have themselves subdivided by cities or community groups. This is highly desirable and we recommend your consideration of this plan of organization. In Essex North a special subcommittee was established in Haverhill for physicians. Another is organizing, with the nurses, a more effective adjustment to the serious shortage of nurses. In Worcester a special committee was established.

We recommend that the Committee on Public Relations be authorized to carry on the work for the Society.

ELMER S. BAGNALL, *Chairman*
CHARLES F. WILINSKY
JOHN J. DUMPHY

APPENDIX NO. 11

LETTER FROM DR. HENRY M. LANDESMAN

February 2, 1943

Michael Tighe, M.D., Secretary
Massachusetts Medical Society Council
Boston, Massachusetts

Dear Mr. Secretary:

Enclosed please find two resolutions, being introduced in the General Court of the Commonwealth, for the approval by the Council.

One of these petitions deals with an arrangement for general reciprocity with other states, and to start immediate treatment when blood of an individual is positive.

The second petition deals with a plan to reduce the annual incidence of contagious and infectious diseases.

Sincerely yours,
HENRY M. LANDESMAN, M.D.

* * *

FURTHER REGULATING RECIPROCAL RELATIONS OF OTHER STATES IN REGARD TO FILING MARRIAGE INTENTIONS

Chapter two hundred and seven of the General Laws is hereby amended by inserting after section twenty B the following section:— *Section 20C.* A certificate of a

qualified or registered physician of any state whose laws are in substantial accordance with the laws of this commonwealth relative to the filing of marriage intentions, to the effect that such physician has examined one or both of the parties to the proposed marriage; that a serological blood test was made by an approved laboratory of that state; and that such test corresponds with that required by this commonwealth, shall be accepted as, and shall be, a sufficient certificate under the laws of this commonwealth.

When such serological blood test for syphilis is positive a clinical examination with subsequent checkup on blood test is positive the person involved shall be instructed to undergo treatment, either by a qualified physician who is competent to treat syphilis or by one of the clinics authorized by the laws of this Commonwealth and to continue such treatment until cured and discharged.

HENRY M. LANDESMAN

PROVIDING A PLAN TO REDUCE THE ANNUAL INCIDENCE OF CONTAGIOUS AND INFECTIOUS DISEASES OF CHILDREN

Chapter one hundred and eleven of the General Laws is hereby amended by inserting after section ninety-one, as appearing in the Tercentenary Edition, the five following sections: Section 91A. It shall be the duty of every parent and guardian of a minor, whenever such minor is ill with any one or more of the following diseases, sore throat, common cold, grippe, measles, chicken pox, mumps, scarlet fever, whooping cough, chills or fever, stiffness in neck, or rash on body, not to send such child or allow it to go to school unless and until it has been examined by a qualified physician or a physician of the local district board of health, whose duty shall be thereupon to inform the parent or guardian that the condition of the child is either noncontagious or infectious, as the case may be.

Section 91B. The department of public health and the local boards of health of each political subdivision of the commonwealth shall respectively provide one or more physicians whose duty it shall be to visit children referred to in Section ninety-one A for the purpose of making diagnosis as to the possibility or probability of the infection or contagion to other children if exposed to the sick child.

Section 91C. Each teacher in each public or private school shall spend not less than five minutes in each school day in instructing the pupils under his charge in regard to covering mouths or noses while coughing or sneezing and as to the necessity of wearing proper clothing in cold or otherwise inclement weather and especially as to wearing rubbers in stormy or slushy weather.

Section 91E. Whoever violates any provisions of sections ninety-one A to ninety-one D, inclusive, shall be punished by a fine of not more than fifty dollars or by imprisonment in a jail or house of correction for not more than one month, or both.

Section 2. This act shall take effect upon its passage.

HENRY M. LANDESMAN

CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICOPATHOLOGICAL EXERCISES

FOUNDED BY RICHARD C. CABOT

TRACY B. MALLORY, M.D., *Editor*

CASE 29111

PRESENTATION OF CASE

A twenty-two-year-old single shoe stitcher entered the hospital because of painful stiffness of the left side of the neck and weakness of this arm.

Approximately four months prior to admission the patient began to suffer with frequent brief attacks of burning pain in the left side of the neck and suprascapular region that radiated to the left shoulder, arm and thumb. The pain was exaggerated by movements of the head and seemed worse at night. During the periods of pain she noticed numbness and tingling in the left forearm and thumb and the left hand seemed cold and weak. Two months later she felt a swelling in the left side of the neck that seemed to vary slightly in size from day to day but did not apparently become larger.

The family history was noncontributory. At the age of six years an equinovarus deformity of the left foot was surgically corrected. For several years the patient had suffered with brief attacks of "stiff neck" that spontaneously cleared.

Physical examination disclosed a well-developed uncomfortable young woman who held her neck rigid, with the head turned slightly to the left. There was no atrophy of the scalenus or sternocleidomastoid muscles. The left longus colli muscle seemed atrophied. There was a slight dorsal cervical scoliosis, with the convexity to the right. Flexion and extension of the neck was good. The pain was marked in the midportion of the left side of the neck. The head could be bent to a 30° angle with the shoulder on the right and to a 55° angle on the left, and could be rotated 80° to the right and 60° to the left. There was tenderness along the left trapezius ridge, which was most marked in the region of a firm nonmovable mass that seemed to arise from the deep structures of the neck at the level of the transverse processes of the fourth and fifth cervical vertebras. No pulsations were felt. There was hyperesthesia along the lateral aspect of the left arm and over the left shoulder. No loss of temperature, touch or vibration sense could be elicited. The left biceps and radial periosteal reflexes were absent. The plantar responses were equivocally positive. Both hands perspired profusely. The pupils were equal and round. The diaphragm was percussed lower on the right than on the left. Examination of the heart, lungs and abdomen was negative, as was a pelvic examination.

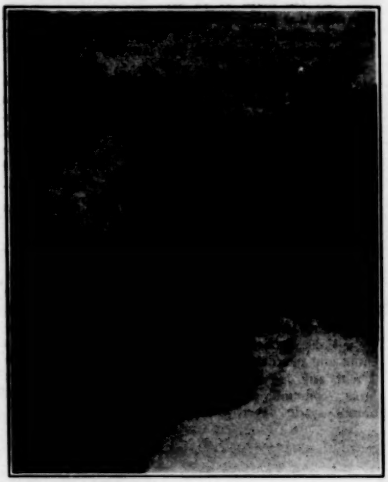

FIGURE 1.

The blood pressure was 104 systolic, 70 diastolic. The temperature was 98°F., the pulse 70, and the respirations 20.

Examination of the blood revealed a red-cell count of 5,300,000 with a hemoglobin of 13.6 gm., and a white-cell count of 6000 with 67 per cent polymorphonuclear leukocytes. The urine was normal. Repeated tests for the presence of Bence-Jones protein were negative. The blood Hinton test was negative. The serum calcium was 10.4 mg. per 100 cc., the phosphorus 4.0 mg., the phosphatase 2.2 Bodansky units, the protein 5.2 gm., and the albumin 3.7 gm. and the globulin 1.5 gm., giving an albumin-globulin ratio of 2.4. A spinal tap showed an initial pressure of 135 mm. of water. The dynamics of the fluid were normal, and it contained 1 lymphocyte and 14 red blood cells per cubic millimeter; the spinal-fluid protein was 29 mg. per 100 cc.

An x-ray film of the spine showed changes in the third, fourth and fifth vertebras (Fig. 1). The articular processes and possibly the transverse processes of these three vertebras formed one mass; the bodies and the greater part of the laminas and

spinous processes were destroyed by what seemed to be an expansile growth. An anteroposterior view of the lumbar spine showed no abnormalities. A chest plate was negative.

An operation was performed on the twenty-second hospital day.

Differential Diagnosis

Dr. W. Jason Mixter: From the history we find a patient who had a lesion in the neck characterized by stiffness, by localized swelling and by pain, both locally and running down into the shoulder and the arm. The neck is a beautiful grab bag for almost any pathologic process, almost but perhaps not quite so good as the lower lumbar spine and sacrum. So far, however, there is little of diagnostic value. Although pain is usually absent in benign tumors of bone, this does not hold in cases involving the spine.

Dr. Channing C. Simmons: No; this is not bone pain but is caused by pressure on nerves.

Dr. Mixter: Yes. Since the pain is due to nerve pressure, we cannot consider that pain is a diagnostic sign. Therefore, from the history alone we gather nothing except that the patient had a mass in the neck causing compression of the cervical plexus. Therefore, local examination simply confirms the impression that she had a tumor, in its widest sense, in the cervical region. The fact that she could move her neck as well as she could tends to rule out an inflammatory condition or a malignant tumor, although not entirely. At any rate she had a tumor approximately at the level of the transverse processes of the fourth and fifth cervical vertebras, with some loss of function in the arm.

The neurologic examination was not helpful. It suggests nerve compression. The plantar reflexes were equivocally positive. That is somewhat suggestive because then we begin to wonder whether she had spinal-cord compression as well as compression of the nerve roots leaving the spine in the cervical region. Nothing is said about the knee jerks and ankle jerks or about clonus. I presume they were negative and absent, respectively.

Dr. Tracy B. Mallory: I think it is safe to assume they were.

Dr. Mixter: Repeated tests for Bence-Jones protein were negative. At the same time we know that the absence of Bence-Jones protein does not rule out the characteristic lesion that causes it. However, the serum calcium and various other blood constituents were normal so we come down to the lumbar puncture. We can probably rule out an inflammatory lesion on the basis of the spinal-fluid findings, and I believe that the serum protein and other blood chemical findings rule out a widespread bone lesion.

The spinal-fluid findings point away from compression of the spinal cord itself. The presence of one lymphocyte and fourteen red blood cells per cubic millimeter is unimportant and probably represents a slightly bloody tap. Therefore we can rule out an inflammatory lesion, probably including tuberculosis, and we come back to neoplasm.

The history suggests that it was of considerable duration because we find that for several years she had had brief attacks of stiff neck that had spontaneously cleared up. During the few months before entry, progression of the disease had been a good deal more rapid. So we come to the x-ray examination, which is of great value in lesions of the cervical spine.

Dr. Richard Schatzki: The record adequately describes the lesion. I do not see anything to add except that the process has led to marked shortening of the cervical spine.

Dr. Mixter: Can you tell me which is the first dorsal vertebra?

Dr. Schatzki: Here is the first rib; this is the first dorsal vertebra.

Dr. Mixter: In other words, the first, second, sixth and seventh vertebras were normal. Hence, the lesion includes three vertebras. Three vertebral bodies were thrown into one, with the spinous processes of the third and fourth fused together. There was certainly fusion of the spinous processes, which points to a malformation, probably congenital. All that suggests that it had been going on a long time. There was a tumor on the left side of the neck, and the right side also appears to be involved.

We come down then to a lesion involving the bodies, the laminas and the spinous processes of three vertebras. A lesion of that sort certainly suggests extremely slow growth and a congenital lesion, because that amount of fusion in the spinous processes usually occurs only in congenital lesions. We must also remember that the patient had a congenital anomaly of one foot. However, since the lesion increased rather rapidly during the years of early adult life, we cannot put it down as a purely congenital lesion of bone. Something else occurred that produced swelling and increasing pressure on the nerve roots. The lesions that I should think of in this connection are chordoma, giant-cell tumor and an enchondroma. There may be a good many others, but these three are the likeliest. I will put chordoma first.

Dr. Mallory: Dr. Schatzki, will you tell us how the argument ran in the X-ray Department?

Dr. Schatzki: I remember the case well, and I believe that we said it was impossible to explain the whole thing by one lesion. The patient must have

had a congenital anomaly to account for the fusion of the three vertebras, but that did not explain the expansile growth that the patient obviously had. The conclusion as I remember it was that she had two things, a congenital anomaly and an expansile growth; I believe we put giant-cell tumor first.

DR. MALLORY: Dr. Simmons, have you any comment?

DR. SIMMONS: I think Dr. Mixter has covered the situation well. My first thought would be a congenital anomaly because primary bone tumor rarely involves three adjacent bones. Destructive primary bone tumors have occurred in a few vertebras, the commonest being the giant-cell tumor. I do not see how you can prove a chordoma. They usually occur at the extreme ends of the vertebral column.

DR. MALLORY: This is a possible situation for chordoma.

DR. SCHATZKI: Does it grow into the transverse processes?

DR. MIXTER: I do not know that it does. I think that it could because one can see it growing into the bone at the base of the skull and out into the sides of the sacrum. There is no reason why it should not go out into the transverse processes. With all this destruction it may well be that your guess is better than mine; in other words, it may have been a giant-cell tumor.

DR. SIMMONS: In this hospital there have been several cases of giant-cell tumor in that situation.

DR. MIXTER: To have congenital anomaly—I think all three of us are in agreement on that—and a neoplasm on top of it is an interesting combination.

CLINICAL DIAGNOSIS

Benign giant-cell tumor.

DR. MIXTER'S DIAGNOSES

Congenital anomaly of cervical spine.
Chordoma?
Giant-cell tumor?

ANATOMICAL DIAGNOSIS

Benign giant-cell tumor.

PATHOLOGICAL DISCUSSION

DR. MALLORY: It was argued on the wards that one must assume both a congenital anomaly and a neoplastic process. For the latter, chordoma and benign giant-cell tumor were most generally considered.

The lesion was biopsied and showed giant-cell tumor. Subsequent to the biopsy a great deal of argument developed about whether the patient should be treated by radiation, surgery or a combination of the two. The final consensus was to try radiation, which has been given in three courses with a considerable degree of improvement. The tumor mass has decreased significantly in size and the nerve-root pain seems to have disappeared entirely. On the other hand, the patient is not cured as yet; she is still coming back for treatment.

DR. MIXTER: Since it was a giant-cell tumor I should like to ask Dr. Simmons how he would feel in a case of this sort about getting out as much of the tumor as possible and packing the tumor cavity with bone chips.

DR. SIMMONS: Following radiation a giant-cell tumor may be destroyed, but new bone is rarely laid down. The cavity is usually filled with fibrous tissue. The few cases that I have seen in which bone chips have been introduced have not formed new bone successfully. That is not true in an ordinary bone cyst.

CASE 29112

PRESENTATION OF CASE

First admission. A fifty-two-year-old single, former fisherman entered the hospital because of persistent burning epigastric pain.

Approximately twenty-five years before admission the patient began to suffer with occasional attacks of persistent burning epigastric pain, which was usually relieved by soda or food. These attacks occurred many times each year and lasted about a week but never interfered with his daily activities. Occasionally during an attack he belched a great deal, but he did not vomit. Seven years before entry, following the death of his mother, he was forced to live alone. Since then the attacks had occurred more often. A year before admission the pain became severer, and the patient gradually lost a great deal of weight and felt weak. He was seen in the Out Patient Department. At that time a healed, nonobstructing duodenal ulcer was demonstrated by x-ray studies. Ulcer diets partially relieved the discomfort, but the patient failed to gain weight.

The family history was noncontributory.

When thirty-two years old the patient had a sore on the glans penis, which healed promptly following topical treatment. Six years later both lower legs were amputated at the calf because of gangrene of the feet following frostbite.

Physical examination disclosed a markedly emaciated man who was nothing more than "skin and bones." However, he appeared to be comfortable. Examination of the heart, lungs and abdomen was negative.

The blood pressure was 88 systolic, 64 diastolic.

The examination of the blood revealed a red-cell count of 5,290,000 with a hemoglobin of 90 per cent, and a white-cell count of 7400 with 82 per cent polymorphonuclear leukocytes. The urine was normal. The blood Hinton test was negative. A stool was guaiac negative. A barium meal demonstrated a characteristic clover-leaf deformity in the duodenal cap but no crater was visible; the pylorus opened readily. A barium enema was negative.

The patient improved and gained weight on a high-vitamin, high-calory diet with supplementary iron, and was discharged on the thirty-third hospital day.

Final admission (six years later). The patient was readmitted because of sharp, crampy abdominal pain and constipation.

Following discharge the patient again suffered with epigastric burning pain, weakness and weight loss despite an adequate diet and rest in a convalescent home. Three and a half years later he began to worry about "people talking about him," and his abdominal pain seemed worse. Occasionally he became bloated and had slight heartburn when he ate small amounts of food. He never became distended and did not belch, but passed large amounts of flatus, which seemed to relieve him. Six months later a barium meal demonstrated that the duodenal cap was grossly deformed and that there was a shallow ulcer crater posteriorly; there was also some associated spasm of the first portion of the duodenum. The remainder of the examination was negative, as was a barium enema. The patient was treated with tincture of belladonna and a six-meal-a-day diet and seemed to improve. A gastrointestinal series four months later showed no definite evidence of activity in the crater of the duodenum.

Four days before entry he began to suffer with rather severe generalized abdominal cramps, which were most marked in the upper quadrants and were not relieved by food. These continued to the time of admission. He did not feel nauseated and did not vomit. Since the onset he had not moved his bowels or passed any gas, despite a desire to do both.

Physical examination revealed a mildly disoriented man. Examination of the heart and lungs was negative. The abdomen was moderately distended. There were generalized tenderness and spasm, but these were most marked over the lower abdomen. One observer demonstrated shifting dullness in the flank. The rectum was filled with firm impacted feces. The prostate was twice its normal size, and was moderately tender and firm. No pelvic masses were felt, and no areas of tenderness were elicited.

The blood pressure was 72 systolic and 40 diastolic.

The red-cell count was 3,350,000, and the white-cell count 3500. The urine showed a +++ test for albumin.

A flat x-ray film of the abdomen showed marked dilatation of the sigmoid and a ground-glass appearance suggestive of free fluid. A small amount of barium inserted through the rectum passed to the rectosigmoid, where it appeared to be blocked; it was difficult to be certain of this, however, because the patient's relaxed anal sphincter permitted spilling of the barium.

Despite the administration of infusions of physiologic salt solution and glucose, blood transfusion and oxygen, the patient failed rapidly and died approximately sixteen hours after admission.

Differential Diagnosis

Dr. Edward B. Benedict: This is a fairly obvious history of duodenal ulcer,—epigastric pain relieved by food,—and x-ray examinations on several occasions confirmed the diagnosis.

The sore on the glans penis is probably of no importance. It healed promptly, and later a Hinton test was negative. I cannot relate that to the gastrointestinal story.

The fact that he was down to "skin and bones" on the first admission makes one think of carcinoma, but since he recovered so rapidly and since his red-cell count was normal, such a diagnosis seems unlikely. Furthermore the patient was alive six years later.

Barium enemas were done several times and were consistently negative until the last admission, which may be of some significance.

The interesting part of the story is the acute episode that began four days before the final admission. The symptoms were then characterized by severe generalized cramps, mostly in the upper quadrants, and the patient had not moved his bowels or passed any gas. The question is whether he had a large-bowel obstruction with perforation or a perforated duodenal ulcer. Against a perforated duodenal ulcer is the fact that he had no sudden pain, as one would expect with a perforated ulcer, and there is no mention of any air under the diaphragm in the flat plate. He had an anemia, which would not be explained by a perforated ulcer, and a barium enema would probably not have been given if his attending physicians had thought the lesion was an acute perforated ulcer. The anemia certainly goes with a carcinoma of the sigmoid, and the x-ray findings were consistent with

a perforated carcinoma of the sigmoid. The white-cell count was low and cannot be explained by perforation unless the patient had an overwhelming infection, with no white-cell response. The temperature, pulse and respirations are not given.

From what I have read so far I am inclined to diagnose a duodenal ulcer and, in addition, a perforated carcinoma of the sigmoid. Will you show the x-ray films, Dr. Holmes?

Dr. George W. Holmes: Most of the x-ray films were taken at previous admissions. There is only one film taken at the last admission, and I am afraid that it is not going to help us. Apparently no film was taken at the time he spilled the enema. The films taken two years before the final admission were interpreted as negative, and I see no good reason to think differently. The only possibility is in the region of the cecum, but there is a good mucosal pattern all the way through and I am inclined to agree with the report. Of course there was plenty of time for something to have happened in the interval. In the last film there is a loop of dilated bowel on the left side, which appears to be large bowel. The bowel above it looks as if it contained fecal material. In other words, there is evidence of obstruction rather low in the large bowel, and nothing more.

Dr. Benedict: How much weight do you put on the fact that the patient expelled an enema?

Dr. Holmes: If he had obstruction low down and was rather sick that is not an uncommon happening.

Dr. Benedict: You think that he probably had obstruction?

Dr. Holmes: Yes. The only other explanation is that he was too sick to pay attention to what was going on.

Dr. Benedict: I shall stick to my diagnosis.

Dr. Tracy B. Mallory: In view of the profound malnutrition, I doubt that the anemia was significant.

A Physician: Was there any spinal-fluid test to rule out neurosyphilis?

Dr. Mallory: No. The opinion of the service was approximately that of Dr. Benedict. It was believed that the patient had large-bowel obstruction and that the duodenal ulcer was inactive.

Clinical Diagnoses

Volvulus of sigmoid, with perforation and peritonitis.

Perforated duodenal ulcer?

Dr. Benedict's Diagnoses

Duodenal ulcer.

Carcinoma of sigmoid, with perforation.

Peritonitis, general.

Anatomical Diagnoses

Duodenal ulcer, with perforation.

Peritonitis, generalized.

Tuberculosis, healed, right apex.

Arteriosclerosis, generalized.

Amputation of both lower legs.

Pathological Discussion

Dr. Mallory: At autopsy we found a perforation, 0.5 cm. in diameter, of the duodenum through the base of a chronic ulcer. The large bowel was obstructed, but merely by fecal impaction, which was of impressive extent. There was, of course, a generalized peritonitis. Nothing else of significance was found. There was nc evidence that he had ever had syphilis.

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AMERICAN RED CROSS

Although the collection of the blood for the 4,000,000 pints of plasma requested by the Army and Navy from the American Red Cross in 1943 is an undertaking whose difficulty and cost are readily appreciated not only by physicians but by the laity, this is merely one of the many useful and necessary functions related to the war effort that are being carried on by this organization. And of these functions, Home Service is an activity concerning which little is known.

Red Cross Home Service has been maintained for many years, and under peacetime conditions is an important cog in the machinery of disaster relief. Recent examples of this work in New England include the aid given—and still being given—to families rendered destitute by the hurricane of 1938 and the care and help provided for persons involved in the Cocoanut Grove fire in Boston and for their families.

With the advent of war, the responsibilities of Home Service have increased manyfold. This is clearly evidenced by the fact that the personnel of this department of the Boston Metropolitan Chapter has increased from four in 1941 to one hundred and seventy-five in 1943, with a corresponding increase in monthly budget from $150 to $6000. All this has been occasioned by various services to men in the armed forces—activities that are acknowledged by the Army and Navy to increase the fighting fitness of soldiers and sailors. The work, which is largely a co-operative effort of the Red Cross field-service men at camps and at the front and the Home Service divisions at home, includes the following: accurate information for the man who is worried about conditions in his home; the investigation of requests for emergency furlough, with financial aid, if necessary; care for and assistance to the families of soldiers and sailors who have been killed or reported missing; and aid to former service men or their families in the filing of claims for relief funds or pensions.

This is part of the reason why the American Red Cross must raise $125,000,000. It is part of the reason why the Boston Metropolitan Chapter must raise $2,145,000, and why the suburban chapters must raise $860,500 more. Surely no one can question the need for such a large sum of money, even though the drive comes at a time when the budgets of most families are in a precarious position. The men in the armed forces deserve all this, and more.

NATIONAL HEALTH ADVISORY COUNCIL

Movements to improve the national health are numerous and familiar. But it cannot be expected that the health situation of the people will be per-

manently bettered before certain undesirable social and economic factors are canceled out. This being the case, the mere formation of another council and the mapping of another campaign can hardly carry a highly dramatic appeal. Even so, every push toward the desired goal is welcome, above all in time of war.

It is good, therefore, to know that the Chamber of Commerce of the United States has formed a National Health Advisory Council, "to project and carry out a broad program looking to health conservation as one of the most important factors in winning the war." Medical authorities estimate that such a campaign if effectively conducted can add a million workers to the forces of defense. In the present situation, it is said, disease and disability are costing the United States something like ten billions a year — a drag on war operations that must be reduced.

The factors to be emphasized in the council's educational drive are personal health, safety, nutrition and physical conditioning, with special stress on war-emergency needs and circumstances. It is proposed through community effort to reduce work absence, increase workers' effectiveness and morale, and assist their families in solving the problems of health, diet, illness and nursing. To this end, approved technical health information will be supplied to business and industrial organizations and civic bodies.

The council membership has begun with thirty leading medical and health authorities, headed by Dr. James S. McLester, professor of medicine at the University of Alabama. Its New England members are Dr. George R. Cowgill, of the Yale University School of Medicine, Professor Philip Drinker, of the Harvard School of Public Health, and Dr. Paul D. White, of Boston, president of the American Heart Association.

MEDICAL EPONYM

Sydenham's Chorea

Saint Vitus's dance (*Chorea Sancti Viti*) was described by the father of English medicine, Thomas Sydenham (1624–1689) in his *Schedula Monitoria de Novae Febris Ingressu* [*Monitory Account of the Appearance of a New Fever*], which was published in 1686. The following is a translation of a section appearing on pages 360 and 361 of the first volume of the Geneva edition of his medical works, published in 1757, *Thomae Sydenham . . . Opera Medica*:

> St. Vitus's dance is a kind of convulsion which usually attacks boys or girls between the age of ten and puberty. It begins with a limp or a weakness of one leg, which the patient drags after him as a simpleton does. It is next seen in the hand of the same side. The patient is unable to keep it still for a single minute. Whether he holds it to his chest or any other part of his body, no matter how much he resists, it is convulsively twisted elsewhere. If a cup of liquid is placed in his hand, before he can bring it to his lips he goes through a thousand gesticulations like a contortionist. He is unable to carry the cup straight to his mouth, for his hand is jerked away by a spasm, twisting here and there until at last, by luck, he brings it to his lips, hurls the liquid into his mouth, and greedily swallows it as though the poor wretch were trying to make the onlookers laugh at his actions.

R. W. B.

MASSACHUSETTS MEDICAL SOCIETY

DEATHS

CARVELL — Hanford Carvell, M.D., of Lanesville, died February 15. He was in his sixty-eighth year.

Born in Marysville, New Brunswick, Dr. Carvell received his degree from the Baltimore Medical School in 1910. He was a member of the Massachusetts Medical Society and the American Medical Association.

His widow, two daughters and a brother survive him.

THAU — William Thau, M.D., of Dorchester, died February 14. He was in his forty-seventh year.

Dr. Thau received his degree from the Medical Faculty of the German University in Prague in 1924. He was a captain in the Medical Corps of the Army of the United States, and at the time of his death was assigned to the Station Hospital at the Indiantown Gap Military Reservation in Pennsylvania. Dr. Thau was a member of the Massachusetts Medical Society and the American Medical Association.

WAR ACTIVITIES

CIVILIAN DEFENSE

Duties in Gas Defense

A program for civilian protection against gas is being rapidly developed by the Medical Division of the United States Office of Civilian Defense. The Gas Protection Section is responsible for organization and training for gas defense. This section functions through the nine national Civilian Defense regions, which are coterminous with the service commands of the United States Army. Regional gas officers have been designated for several of the coastal regions to supervise and assist the state gas consultants and

the senior gas officers of defense councils in the organization of state and local programs. The senior gas officer trains gas reconnaissance agents who serve in the respective zones of their city. These men are responsible for the identification of the agent, the collection of samples, the prevention of casualties and the delimiting of gassed areas, and also for co-operation with Emergency Medical Service, the health department and other agencies concerned in protection against gas.

For Emergency Medical Service the duties are set forth as follows:

Duties before gas attack:

1. Plan, with the assistance of the senior gas officer, for the establishment of stations for the cleansing of gassed patients with other injuries and for the cleansing of civilian protection personnel. Each hospital of 150 beds or more should be provided with a cleansing station. Cleansing stations should be available in the ratio of one per 50,000 population and should be located at small hospitals or casualty stations if 150-bed hospitals are not available in this ratio.

2. Recruit, train and assign personnel to gas-cleansing stations for cleansing services.

3. Provide instruction, in co-operation with the senior gas officer, for general public and civilian protection personnel in self-protection and self-cleansing.

4. Provide for instruction of physicians in diagnosis and treatment of chemical casualties.

5. Assist hospitals in planning for the handling of gas casualties.

6. Assure adequate distribution of protective clothing and gas masks and other protective equipment to members of mobile medical teams and train personnel in their use.

7. Make provision for training drivers of ambulances and sitting-case cars in the protection of their equipment against liquid-gas contamination; inform them of arrangements for vehicle decontamination by Emergency Public Works Service.

8. Arrange for the protection from contamination of the equipment used to transport contaminated casualties in so far as it is possible.

Duties during gas attack:

1. On advice of the senior gas officer and under the orders of the commander, man the gas-cleansing stations.

2. Advise other services of the Office of Civilian Defense in regard to first-aid cleansing of their personnel.

3. Assign a mobile medical team to gas-cleansing stations for first aid.

Duties after gas attack:

1. Evaluate the effectiveness of the cleansing procedures that have been used.

2. Provide follow-up treatment of patients.

3. Prepare an inventory of protective equipment available for use in future attacks and obtain additional equipment as necessary.

4. Cleanse bodies of the dead to facilitate identification.

Gas masks are now being distributed to the personnel of the protective services.

Masks should be kept at the post where the protective personnel will assemble during drills or enemy action, not carried by them during their daily activities. It is recommended also that about 20 per cent of the masks allocated to each service be stored as a reserve. It is important that the reserves be decentralized as a safeguard against destruction by fire or bombing and also to permit rapid distribution in case of an emergency.

Since valuable and critical materials are used in the manufacture of gas masks, the utmost care must be exercised in their handling, distribution and storage. No person should receive a mask until he has been trained in its use and care, including proper storage.

Storage must be in a cool dry place, and masks should be kept from contact with sunlight, oils and corrosive liquids and vapors. After use, masks should not be worn by another individual without proper sterilization.

Repair of masks is not to be attempted locally except in case of extreme necessity. Broken and defective masks or those with exhausted canisters should be collected by the local property officer and returned to the supply depot for repair and replacement.

MISCELLANY

ARMY-NAVY "E" AWARDED TO PARKE, DAVIS AND COMPANY

The Army-Navy "E" pennant for excellence in production was awarded to Parke, Davis and Company, of Detroit, on February 26. Brigadier General John M. Willis, commanding officer at Camp Grant, Illinois, presented the award, which was received by Dr. A. W. Lescohier, president of the company. The insignia, which all employees are entitled to wear, were presented by Lieutenant E. B. Williams, senior medical officer of the Detroit Naval Armory, and were accepted by John Tighe, representing the employees.

NOTE

Dr. Ralph E. Wheeler, assistant professor of public health at Vanderbilt University, has been appointed professor of bacteriology at Tufts College Medical School. Dr. Wheeler graduated from Harvard Medical School in 1930 and received the degree of Doctor of Public Health from Johns Hopkins University in 1932. He will assume his new duties on April 1.

BOOK REVIEWS

Serology in Syphilis Control: Principles of sensitivity and specificity. By Reuben L. Kahn, M.S., D.Sc. 8°, cloth, 206 pp., with 35 tables and 1 chart. Baltimore: The Williams & Wilkins Company, 1942. $3.00.

Hinton, Kahn and Kline have worked out precipitation tests in syphilis that are used on a large scale as supplements to or substitutes for the Wassermann reaction. These tests are being applied to millions. It is regrettable that quantitative procedures, such as Kahn discusses in one of the chapters of this monograph, have not had sufficient trial in practice; Wassermann, recognizing their importance, studied this problem for years. This book, however, does not deal primarily with the technic, but with the development, establishment and maintenance of sen-

sitivity and specificity levels of the tests, with special reference to the control of syphilis.

The role and limits of these tests are discussed in detail in the first four of the fourteen chapters; and their source is traced to the discoveries of the phenomena of complement fixation and precipitation in a survey that will be of interest to the historian of immunology. Although citing Neisser and Sachs as starters of the application of the Bordet–Gengou reaction to syphilis in his historical sketch occupying two chapters, the author does not quote the inspiring influence of Moreschi's phenomenon on their researches. A formula that takes into account the two main factors affecting the diagnostic value of serologic tests is the leitmotiv of the following chapters, in which the use of the supersensitive (presumptive) as well as of multiple tests is authoritatively discussed. The importance of standardization and the need of co-operation by syphilologists in carrying out this task are emphasized in a separate chapter. The first of the two chapters forming an appendix gives useful directions concerning the value of serologic tests for the control of syphilis by public-health officers. The summaries of fifteen papers presented at two conferences held in Ann Arbor bring to a close this interesting monograph.

The aim to give a fuller understanding of the principles of serology underlying the tests, without debating which one is the better or the poorer, has been properly achieved. The considerations brought forth by the author will enable the physician to best utilize these tests in the diagnosis and treatment, as well as in the control, of syphilis.

Intestinal Obstructions: A physiological and clinical consideration with emphasis on therapy. By Owen H. Wangensteen, M.D., Ph.D. Second edition. 4°, cloth, 484 pp., with 143 illustrations and 44 tables. Springfield, Illinois: Charles C Thomas, 1942. $7.00.

It is only during the past decade that the complicated problems of intestinal obstruction have been attacked vigorously by the experimental method. No one figure stands out more prominently in the advances of this era than that of Wangensteen. Not only has he labored in the clinic and laboratory to find the answers to many of the unknowns of intestinal obstruction, but he has stimulated others to search for answers.

This book is a scholarly summary of the knowledge of intestinal obstruction to date. Many have associated the name of the author with the conservative treatment of intestinal obstruction. This is but a half-truth, and one need not read far into the book to discover that Wangensteen also operates for intestinal obstruction. The heading of one chapter is "Surgery: The mainstay of therapy." Cases of simple obstruction without strangulation can be safely treated by duodenal suction and the finesse of the surgeon lies in his ability to diagnose simple obstruction. Even Wangensteen seems to err on the side of operation when there is doubt of strangulation, but in the majority of cases he believes that a differentiation can be made on the basis of clinical and laboratory findings. The main thesis of the book, however, is not whether to operate. In spite of the author's personal experiences in this respect, he has risen above things close at hand and has given as impartial and comprehensive a review of intestinal obstruction as seems possible at the moment.

The physiology and pathology of intestinal obstruction are discussed in detail. At the end of the chapter "Effects of Distention," the author concludes that mechanical factors are far more significant than toxic factors in explaining the effects of low intestinal obstruction. This essential clarification of a complex problem by a thorough rationalization of experimental data provides an eminently sound basis for all the therapeutic procedures that follow. The use of suction and its indications are reviewed. The surgical treatment of specific obstructions, such as intussusception, paralytic ileus and colonic obstruction, is given, with excellent drawings showing technic and pictures of illustrative cases. A lengthy bibliography follows each chapter.

Certain repetitions in the work are noticeable even when one reads through hurriedly. However, these are necessary to make a fairly complete unit of each chapter without resort to cross-reference. This feature makes the book a handy and readily available guide when specific problems concerning intestinal obstruction arise.

Psychotherapy in Medical Practice. By Maurice Levine, M.D. 8°, cloth, 320 pp. New York: The Macmillan Company, 1942. $3.50.

This book gives in detail the various types of psychotherapy that can be applied in the treatment of the mental states, particularly the neuroses. The writer is a psychoanalyst and believes this is the best approach to the treatment of mental disorders. He does not, however, deny the limited value of the other forms of psychotherapy.

From the standpoint of the exposition of technic and the details of approach to patients, his book can be recommended as a useful addition to the general practitioner's library. From other standpoints, however, the reviewer finds much to criticize.

The familiar position of psychoanalysts — that they understand and can cure most of the mental difficulties of mankind — is well exemplified by the author. The psychiatrist knows all about the bringing-up of children, as well as being competent to advise in matters of marriage, sex, social relation, the choosing of a career and so forth, and the book provides a ready answer for difficulties, maladjustments and those mental illnesses concerning which psychiatry is, in reality, in a state of incomplete knowledge, to put the situation mildly. For example, the neuroses are not as yet understood either regarding genesis or regarding treatment, these fundamentals being quite unsatisfactory despite the claim of the psychoanalysts. Certainly the psychiatrist qua psychiatrist has not the wisdom, let alone the knowledge, to advise the human being successfully, beset as he is by the incongruities, cruelties and crudities of modern social structure, nor is there yet any ready reconciliation of the opposing forces to which every human being is subjected from the cradle to the grave. Psychotherapy of whatever form must yet prove its claims in the treatment of the major neuroses. It has contributed nothing of importance to the treatment of the psychoses, and it has remained for the physical approaches, such as shock treatment, to make an inroad on the grave problems presented by schizophrenia and manic-depressive psychosis. It seems safe to say that more concrete knowledge is to be expected from brain-wave studies than from any psychologic analysis yet evolved.

In the reviewer's opinion, extraordinary claims on the part of psychiatrists injure the growth and development of one of the most important and slowly developing branches of medicine. The psychiatrist has two main duties — to be humble in his claims and industrious in his researches.

(Notices on page xiii)